National Seashore

master plan

CAPE COD

NATIONAL SEASHORE / MASSACHUSETTS

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CAPE COD COMMUNITY COLLEGE

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Master Plan

cape cod

National Seashore ■ Massachusetts

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Summary

The Master Plan for preservation and use of Cape Cod National Seashore was prepared in 1962, and approved in 1963, after review and recommendation by the Advisory Commission. This is a second edition of the 1963 plan, in a new format and with such revisions as five years of experience in developing and managing dictates.

This edition has three parts. The Purpose and Objectives set the tone and provide general direction. The Regional Description and Analysis, Resource Description and Evaluation, Factors Affecting Resources and Use, and Visitor Use Sections set forth the basic data which influence planning. The Plan Section presents planning recommendations derived from the Purpose, Objectives, and factual background.

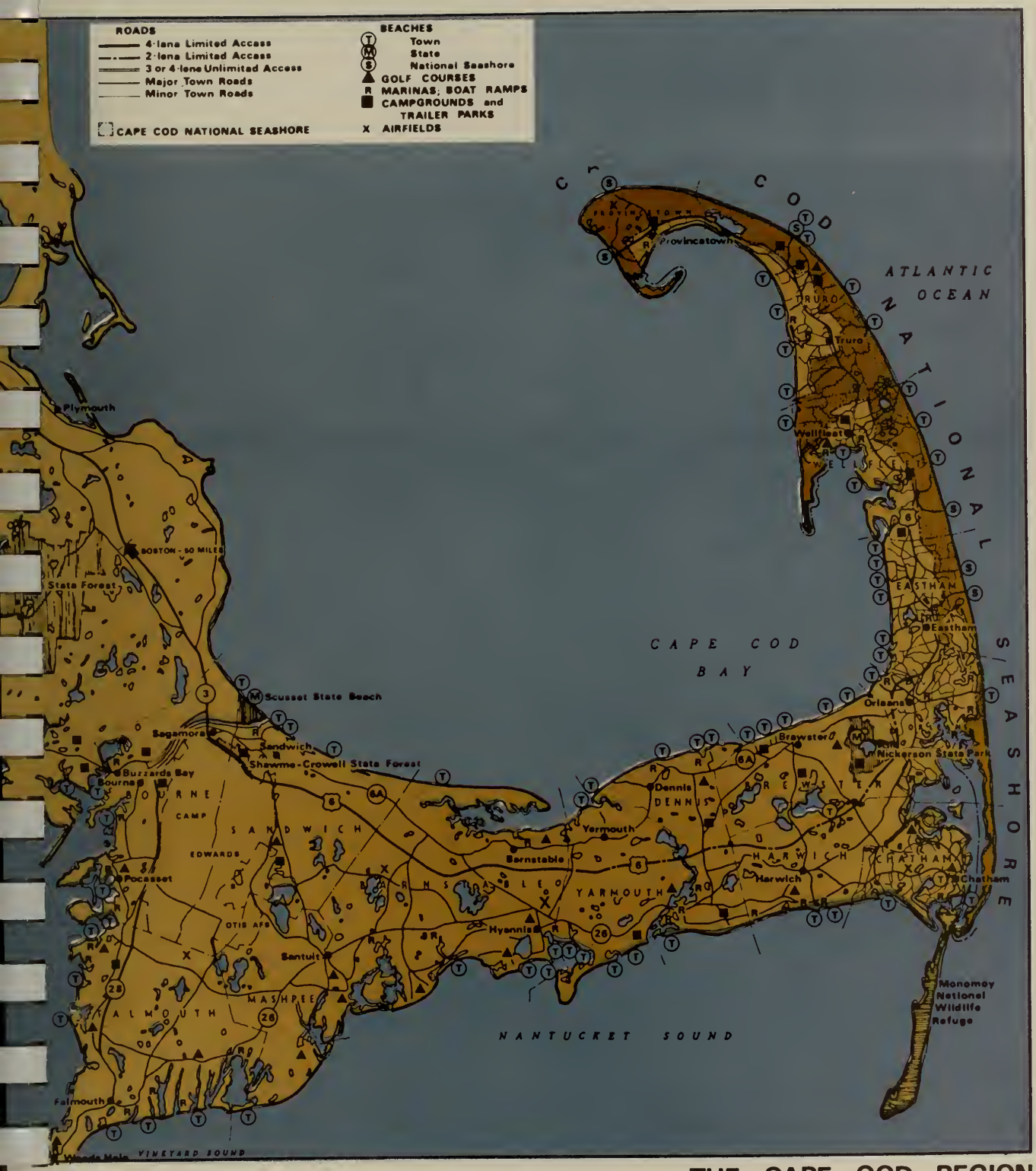
Several factors influence planning for Cape Cod National Seashore. First, the Seashore is an integral part of the Southeastern Massachusetts region. The region attracts visitors, provides overnight accommodations and offers many recreational facilities. The Seashore preserves much of the natural resource which attracts visitors to the Cape, and provides recreational and interpretive facilities which augment and complement those provided elsewhere. Seashore resources provide an exceptional base for such outdoor pursuits as swimming, fishing, surfing, hiking, and biking; for nature and history study; and for cultivating an awareness of man's relationship with his environment. However, many of these resources are very fragile.

Factors affecting resources and their use include the provisions of the Act which authorized the Seashore, the presence of substantial amounts of privately owned and town-owned land within the Seashore boundaries, and a temperate climate which makes off-season use possible. Significant aspects of visitor use include a high percentage of day use by people staying on the Cape but outside the Seashore, very heavy use in July and August with unusually light use the rest of the year, and a tendency by visitors to go to a given Seashore facility and spend considerable time there before moving on.

The Plan Section recommends the facilities required to support recreation and interpretation. In this, it closely follows the first edition of the Seashore Master Plan. Emphasis is given to correlating Seashore planning and regional planning, particularly in

providing better access and in determining optimum capacities for both the Seashore and Cape Cod as a whole. Studies to determine the feasibility of increasing beach capacity by constructing parking lots just off Route 6 and providing public transportation to the beaches are suggested. A program to encourage off-season use is set forth. Environmental education is stressed. Continued cooperation with State and local agencies in resource management is emphasized.

LOCATION MAP



THE CAPE COD REGION

Purpose And Objectives

The purpose of Cape Cod National Seashore is to assure this and future generations the opportunity to enjoy the outstanding scenic, scientific, historical and recreational resources found here, and to gain a greater appreciation of this environment and man's relationship to it.

To achieve this purpose, the National Park Service will follow the objectives based upon the purpose of the Seashore as defined in the authorizing Act of August 7, 1961, and upon policies enunciated by the Secretary of the Interior.

Section 7 (b) (1) of the authorizing legislation states that:

> *In order that the Seashore shall be permanently preserved in its present state, no development or plan for the convenience of visitors shall be undertaken which would be incompatible with the preservation of the unique flora and fauna or the physiographic conditions now prevailing or with the preservation of such historic sites and structures as the Secretary may designate: Provided That the Secretary may provide for the public enjoyment and understanding of the unique natural, historic and scientific features of Cape Cod within the seashore by establishing such trails, observation points, and exhibits and providing such services as he may deem desirable for such public enjoyment and understanding: Provided, further That the Secretary may develop for appropriate public uses such portions of the Seashore as he deems especially adaptable for camping, swimming, boating, sailing, hunting, fishing, the appreciation of historic sites and structures and natural features of Cape Cod and other activities of similar nature.*

Section 7 (b) (2) directs that:

In developing the seashore the Secretary shall provide public use areas in such places and manner as he determines will not diminish for its owners or occupants the value or enjoyment of any improved property located within the Seashore.

On November 3, 1965, the Secretary reaffirmed his awareness of the obligation to follow this legislative directive, stating that:

- *Our job at Cape Cod is clearly to protect the area and provide public access without damaging its beauty *** The Master Plan worked out with the Cape Cod Advisory Commission is our blueprint.*

- *No change in our plans, and no change in our policy will be made. The Cape Cod Act is assurance of this.*

Priority of Management The National Park Service will continue to manage and develop the Seashore within the letter and spirit of the authorizing legislation; undertaking no development for the convenience of visitors which would be incompatible with the preservation of the unique flora, fauna or physiographic conditions, or with the preservation of historic sites and structures, but developing and managing for public recreational uses specified in the Act those portions of the Seashore especially adaptable for such use and so located and planned as not to diminish for its owner the value and enjoyment of any improved property within the Seashore.

Service to Visitor The National Park Service will cooperate with permittees, concessioners, private enterprises and local governments to assure that all services supplied the visitor within the Seashore adhere to standards which will ensure an experience enriching to body, mind and soul. Development and management will be based on a thorough knowledge of the visitor and the way in which he uses the Seashore.

Provision of Facilities Visitor facilities within the Seashore will be planned and provided to attain good balance and diffusion of use throughout; creating patterns of use which will harmonize with uses in adjoining communities, and preserving the Cape Cod atmosphere.

Off-Season Use Use of visitor facilities throughout the year will be sought by encouraging off-season visits by schools and like groups, by encouraging activities suited to the different season, and by providing winterized facilities needed to support such use.

Research Inventory of Seashore resources will be completed and a plan for research which can be carried out in large part by cooperating academic and scientific institutions will be prepared and implemented.

Visitor and Resident Protection Protection will be provided to visitors and property owners within the Seashore in cooperation with local authorities to enable them to properly and safely enjoy the natural features and recreational facilities with a minimum of intrusion on private property owners' rights and a minimum damage to natural resources.

Concessions All commercial visitor services will be supplied outside the boundaries, except for existing facilities operating under supension of condemnation certificates and those concessions required to provide minimal essential services.

Comprehensive Planning for Use The National Park Service will encourage regional planning efforts and will cooperate with State and local agencies to the

maximum extent consonant with its responsibilities to the American public in seeking solutions to regional problems.

Primary Pattern of Use A pattern of use and development will be sought which will enable visitors to enjoy the natural beauty and charm of the Cape, obtain an understanding of its natural and man-made features, and participate in those recreational activities for which the Seashore is especially suitable and which are specified in the Act of August 7, 1961.

Resource Management Programs The Seashore will be conserved and protected through effective management programs based upon a thorough knowledge of Seashore resources.

Architectural Theme All park structures will be so designed as to conform to the Seashore's architectural theme as exemplified by the facilities already constructed by the National Park Service.

Scope of Collections The Seashore, museum collections will be limited to those artifacts recoved by archeological projects on Federal lands and to those archeological, historical and natural history specimens required for effective interpretation and for a representative study collection.

Visitor Information The National Park Service will, in cooperation with State, local, and private groups, develop an informational program to acquaint all visitors with the facilities and services provided for their use and to encourage a use pattern which avoids overcrowding of some facilities and underuse of others.

Interpretive Theme The story of Cape Cod is the history of natural forces and man's effect on this landscape.

Environmental Education The National Seashore will continue to develop and implement those phases of the Service's evolving Environmental Education program applicable to this area and resources.

Cultural Facilities The National Park Service will cooperate in encouraging cultural activities within the limits of existing facilities and staff.

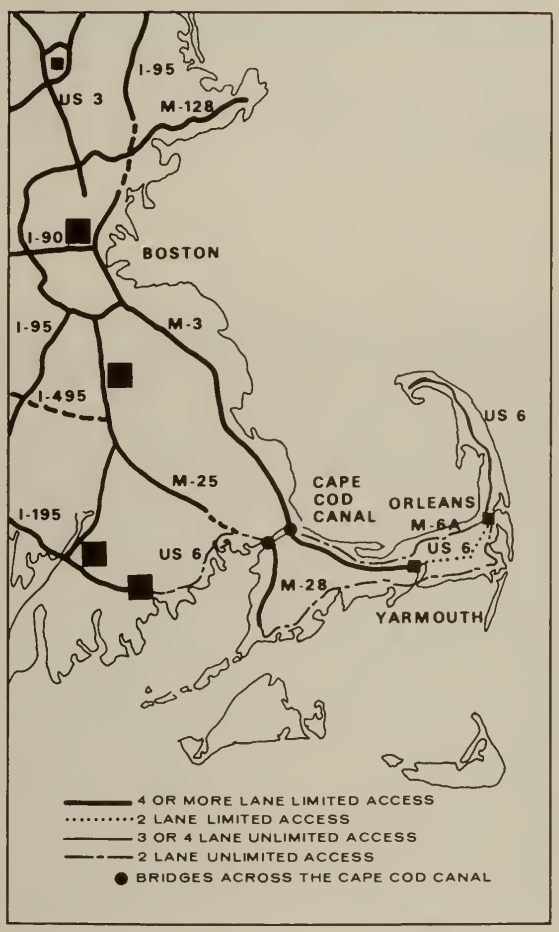
Regional Characteristics And Analysis

Access and Circulation

Cape Cod is accessible by private car, intrastate bus, and by air. Bus service from Providence and Boston to Provincetown by way of Hyannis operates all year. Barnstable Municipal Airport in Hyannis handles four flights per day from New York and two from Boston. During spring, summer and fall, airports at Chatham and Provincetown are served by a number of daily flights from Boston. Air, and ferry service to Nantucket and Martha's Vineyard are available.

Still, most visitors arrive on the Cape by private car. The sketch shows the network of Interstate, United States and State routes which feed visitors from the northeastern seaboard megalopolis to the Cape Cod Canal and the two bridges linking the Cape with the mainland.

United States Route 6, the Mid-Cape Highway, is the primary route from the canal to the rest of the Cape. This highway is four-lane limited access from the canal to Yarmouth, two-lane limited access from Yarmouth to Orleans, unlimited access three and four-lane undivided from Orleans to North Truro, and limited access four-lane divided from North Truro to Provincetown. Massachusetts Route 28 and 6A, both two-



lane, winding low-capacity roads, parallel Route 6 from the canal to Orleans, and serve as secondary access roads.

Access to the Seashore from Route 6 and 28 is by spur roads, most of which are owned and maintained by the towns. The Seashore has no internal circulation system. The network of town roads within the Seashore privides some internal circulation within sections of the Seashore, but to move from one section to another the visitor must return to Route 6.

POPULATION DATA

Cape Cod is adjacent to a region containing the largest concentration of people in the United States. This urban environment is a complex of cities, towns and suburbs stretching from Portland, Maine to Norfolk, Virginia. Nearly one-third of the Nation's people live within a day's drive of the Seashore.

Information gathered from several sources during the 1967 season revealed that 30 percent of all visitors came from Massachusetts and an additional 45 percent from the neighboring States of Connecticut, New York and New Jersey. These figures covered mainly people spending one or more nights in or adjacent to the Seashore; those driving to the Cape for the day would include a much higher percentage of Massachusetts residents. Campers at the three private campgrounds within the Seashore included relatively high proportion of visitors from Canada (40 percent during the last two weeks of July).

Orleans, adjacent to Seashore boundaries, provides most necessary community services except for a hospital. Hyannis, 30 miles from the Seashore, is the commercial and transportation hub on Cape Cod with full range of community services. Boston and New Bedford, located 100 and 75 miles respectively from Seashore headquarters, are the nearest metropolitan areas.

REGIONAL POPULATION TRENDS

Town	Distance From Headquarters	1950 Pop.	1966 Pop.	% Change
Provincetown	18	3,795	3,463	-8.4
Orleans	8	1,759	3,181	+80.8
Hyannis	30	4,235	5,139✦	+21.1
New Bedford — Metropolitan Area	75	141,984	143,176✦	+0.8
Boston Metropolitan Area	100	2,410,572	3,177,000✧	+31.8
Providence Metropolitan Area	100	760,202	735,000✧	-3.3

✧ 1964 Figure
✦ 1960 Figure

PARK AND RECREATION FACILITIES

The Cape Cod region, a long established and enormously popular vacation area, offers a tremendous number and variety of recreational facilities and features of interest. Recreational facilities available on Cape Cod and in the adjacent portion of Plymouth County include:

- **Camping** Miles Standish State Forest (12,000 acres), Roland C. Nickerson State Park (1,727 acres), Shawme-Crowell State Forest (5,917 acres) and 21 private campgrounds contain 3,064 campsites-1,400 of which will handle trailers.

- **Swimming** Including the six National Seashore beaches now in operation, Cape Cod has 112 publicly owned salt-water beaches with 22 miles of water frontage and 300 acres of usable beach. Parking for about 14,500 cars is available, giving a total daily capacity of about 150,000 people.

- **Golf** Three public, two semipublic and two member or guest 18-hole courses, nine public or semipublic nine-hole courses, and four public par-three courses are available.

- **Boating** Marinas, boat yards or yacht clubs are found in most of the major waterfront towns. Boat liveries are found on seven of the 77 inland ponds of 20 acres or more, including Great Pond and Gull Pond within Seashore boundaries.

- **Fishing** Charter and fishing party boats are readily available.

- **Other** Stables are found in several towns, and miles of lightly traveled unpaved roads are available to ride on. Tennis courts and bowling alleys are available in several larger towns.

In additon to recreational facilities, the Cape boasts a host of things to see. Ranging from animal farms through aquariums to art galleries, summer theaters and history museums, there are over 50 such attractions on the Cape.

SURROUNDINGS AND EXISTING USE

Surrounding lands are similar to those within the Seashore in terrain, climate, vegetation and so forth. The only significant difference is that the end moraine of the upper Cape is more resistant to erosion and better adapted to intensive use than is the glacial outwash and ocean borne sand of the lower Cape and the Seashore.

Most lands within Barnstable County, which is virtually coterminous with Cape Cod, are privately owned. Exceptions include the Cape Cod Canal and some 1,132 acres of associated lands and structures administered by the Corps of Engineers, Camp Edwards, Otis Air Force Base, Monomoy National Wildlife Refuge, several Coast Guard installations, Nickerson State Park, Shawme-Crowell State Forest, many town-owned recreation or conservation lands, and lands held for conservation by such organizations as the Audubon Society. Private lands are for the most part used for year-round or seasonal residences, or for restaurants, motels and other facilities to serve tourists. Agriculture has almost disappeared from the Cape, though cranberry growing has recently staged a come-back on the Upper Cape. Commercial fishing and shell-fishing have declined while salt water sports fishing has grown tremendously. Experiments to improve production of shell fish are being carried out

and may eventually revive this activity. There is almost no industry. Much land is vacant.

In general, the land use pattern in the adjoining towns consists of one or more village centers, mostly a mixture of commercial and residential use, with scattered residences throughout the remainder of the town. Generally, residences are most numerous along shorelines, more scattered in the uplands. Strip commerical development is prevalent along Route 28 between Hyannis and Chatham, and is beginning to develop along those portions of Route 6 where access is not limited.

Several land use trends are noticeable. First, as more summer visitors are attracted to the Cape, more rental cottages, motels, restaurants, gas stations and other facilities are built to serve them. Second, more and more retirement homes are being built. Third, the upper Cape is attracting year-round residents who frequently commute to various metropolitan areas in the northeast. As a consequence, the permanent population of the Cape is increasing and higher percentage of new residential construction is intended for year-round use. It should be noted that the rate of population growth and the percentage of new residential construction intended for year-round use both tend to be higher for the upper Cape than for the towns adjoining the Seashore.

These trends have resulted in a marked increase in the percentage of population aged 50 or over, and a decline in the percentage of those between 20 and 49.

Two final factors in regional land use should be noted, both of which will have an affect on the Seashore. The first is the very strong wetlands preservation legislation recently enacted by the Commonwealth of Massachusetts. This legislation virtually prohibits the filling in, draining, or other destructive use of fresh water marsh lands. The second is the proposed Ocean Sanctuary proposed by the Commonwealth and currently being considered by the legislature. Such a sanctuary would protect the ocean waters around Cape Cod from all adverse activities such as drilling within a three-mile offshore limit.

REGIONAL ANALYSIS

Cape Cod National Seashore is distinctive for many reasons. Not the least of these is the degree to which the Seashore affects and is affected by the region around it, and the complexity of this relationship. The Seashore has been superimposed on communities which have been in existence for 300 years, and the authorizing legislation contains many pioneering provisions which provide for relationships among Town, Commonwealth and Federal Governments.

It is to Cape Cod, with its charming old towns, its beaches, its marshes, wooded hills and open heaths, its distinctive architecture and atmosphere, that visitors come. This region is affected by the Seashore in three important ways. First, the Seashore preserves for public use an important and representative part of the scenic and recreational resources which are so important to the Cape. Second, it provides for a range of activities, such as biking, hiking and nature study, which are not provided for to nearly the same degree elsewhere in the region. Finally, the Seashore provides recreational facilities, such as beaches, which complement and supplement like facilities provided elsewhere.

The Seashore is also affected by the region in several ways. First, most visitors are attracted primarily by the Cape as a whole, and only in part by the Seashore. Most of those who visit the Seashore and use its facilities are day-users who are either permanent or seasonal residents of the Cape or are staying in campgrounds, motels or rental cottages. Second, recreation facilities provided elsewhere on the Cape complement Seashore facilities and play an important role

in determining the demand for such facilities within the Seashore.

Beyond these factors, the Cape as a whole and the Seashore face challenges common to both; challenges which can be fully met only through close cooperation. Both the Cape and the Seashore have optimum capacities for development and use which can be exceeded only with severe damage to the resources which attract visitors and permanent residents. Present access to both is inadequate, yet both have an interest in providing better access by means which do not pour more people into the region than it can accommodate. The upper Cape, with its more stable soils, could accommodate uses for which there is a demand but for which the less stable soils of the lower Cape and the Seashore are not well suited. In short, the Seashore and the rest of the Cape are so interrelated that neither can fully meet the challenges of the future without close cooperation with each other and with other State and local agencies.

Close as is the relationship between Cape Cod and the Seashore, even closer is the relationship between and among the six adjoining towns and the Seashore. The town of Truro is a Seashore concessioner. Three of the towns now operate beaches within the Seashore boundary and a fourth is considering doing so. Important town facilities, such as town dumps and the Provincetown Airport are within the Seashore, and the Seashore is an important part of the watershed of four of the towns.

Owners of improved properties in the Seashore pay town real estate taxes, and look to both the town and the Seashore for protection. Seashore visitors use town roads to reach Seashore facilities, and for pleasure driving. Town police and fire protection agencies work closely with the Seashore, providing additional protection at less cost. In all of these relationships, continued close cooperation on the part of both town and Seashore, recognizing the latter's responsibility to the American public, is essential.

Resources Description And Evaluation

The basic form of Cape Cod is the result of glaciation modified by post-glacial erosion. In the final stages of Wisconsin glaciation (from 10 to 15 thousand years ago), the backbone of the upper Cape, the Sandwich moraine, was deposited along the terminal edge of the ice sheet. A lateral moraine was deposited at right angles to the Sandwich moraine, east of the present shore of the lower Cape. Water from the melting glacier carried sand, gravel and small rocks westward from this second moraine and deposited it as an outwash plain. As the plain built up, it covered blocks of ice left by the melting glacier. When these ice blocks melted, the covering slumped in to form kettle holes. Those kettles reaching below the water table form the numerous ponds present today. At this point the rising sea took over, cutting away the glacial material and moving it laterally along the shores of the Cape. This process, aided by the wind, has resulted in such features as the 39-mile sweep of ocean beach, the 15-mile scarp or sand cliff facing the Atlantic from Coast Guard Beach to Highland Light, the 8 square miles of dunes in Provincetown, Nauset Beach and Monomoy Island, the "islands" and connecting tombolos or sand beaches of the Bayside, salt meadows and hanging valleys, which are old glacial meltwater channels (pamet valleys) whose heads have been eroded away, leaving notches or hollows in the sand cliffs. Nowhere else in the country is the story of glacial depositon and the action of sea and wind on a fragile land mass so vividly illustrated.

As the glacier melted, plants moved in. Eventually, the moraine and outwash plains were covered with mature forests of hardwood or pine. Then, some 4,000 years ago, man arrived, and began changing the picture. Indians of the Archaic, Woodland and Contact periods altered the ecology of the Cape by burning its forests.

Still, the major changes came with European settlement. By 1850, hardly a first growth tree was left on the Cape. This cutting, together with slash and brush fires, grazing and farming, very substantially altered the ecology of the Cape. Today's landscape is the result of these factors plus the natural effects of the sea and wind.

This landscape can be divided into types or patterns, shown on the sketch and described in the following pages.

The Great Beach A sand beach extends for 39 miles along the outer side of the Cape, broken only by the narrow inlet of Nauset Harbor. In Provincetown and Truro, the beach is wide, gently sloping, and backed by high dunes. From Highland Light south to Coast Guard Beach, the beach is isolated below high sand cliffs, and has few natural access points. South of Coast Guard Beach the Great Beach takes the form of a sand spit averaging less than a quarter-mile wide, and is backed by low dunes, salt marshes, and the open water of Pleasant Bay. Because the shoreline forms a convex curve, less than a mile of the beach can be seen in either direction from any point along it.

The Bay Side The shores of Cape Cod Bay impart a more serene mood than those of Great Beach. The Seashore includes 6-1/2 miles of Bay Beach from Jeremy Point northward. Here is an extremely wide foreshore, sloping gently into the calmer, warmer water of the Bay. Often this beach is stony, particularly at or below the tide zone, and at low tide the adjacent waters are shallow for hundreds of feet offshore.

Jeremy Point, Great Beach Hill and Great Island, the southern penisular extension of this region, are connected to the mainland by a narrow sand barrier called "the Gut," and convey a sense of isolation from the mainland. Above the northern half of the bayside beach roll extensive heathlands, dimpled with deep-set kettle holes. Here, too, are the Herring River and estuary, and the fresh water marshes of Duck Harbor and Bound Brooks.

Dunes In Provincetown and Truro are eight square miles of some of the most spectacular dunes along the Atlantic coast. There are both stable and moving dunes up to 90 feet high, sunken forests (skeletons of trees first engulfed by sand and then exposed again), ponds and marshes, and areas of tangled shrubs and waving beach grass.

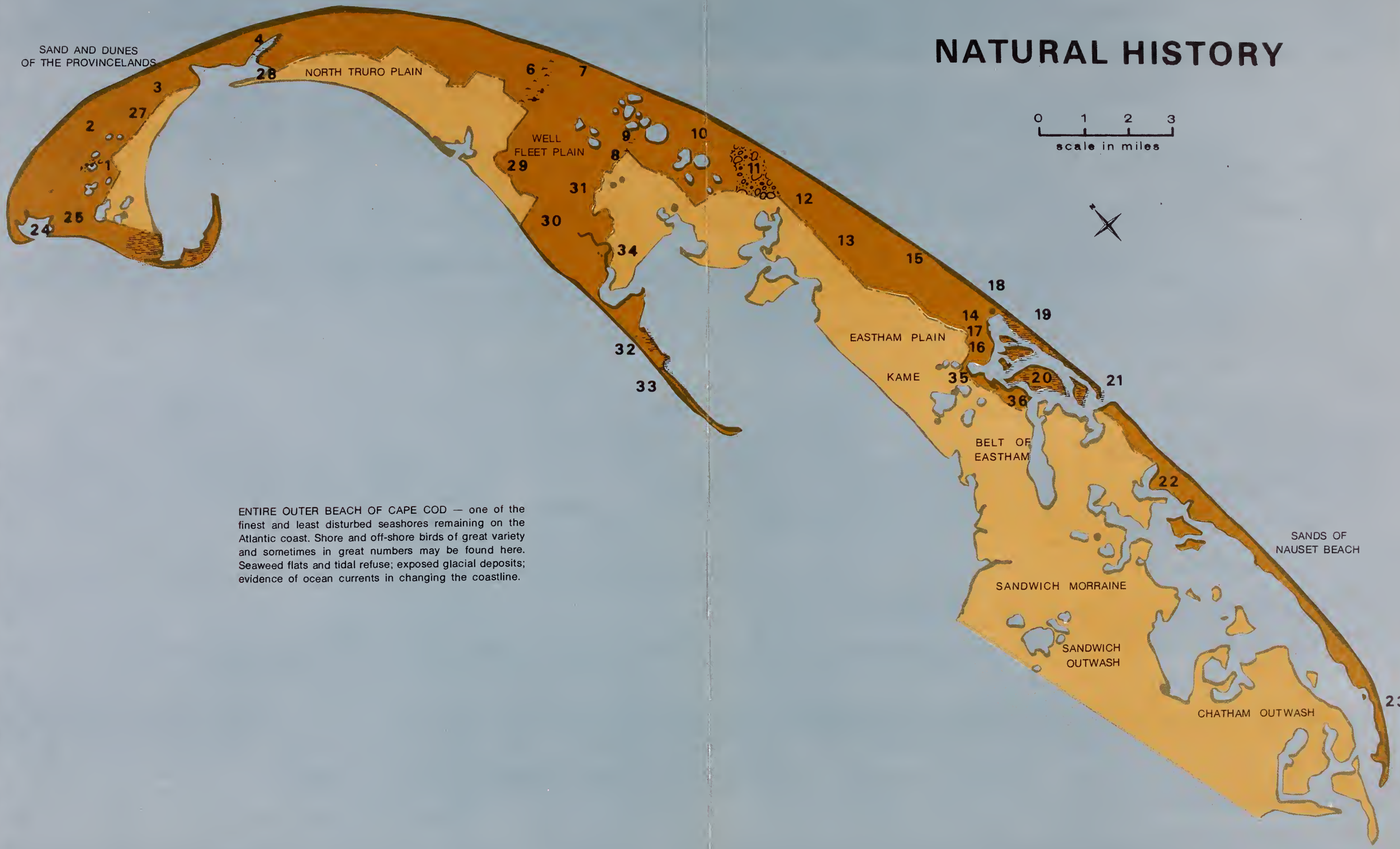
Ponds and Pamets Within the towns of Truro and Wellfleet, lies an area of ancient river valleys and quiet, deep set freshwater ponds, providing a striking contrast to the restless Atlantic nearby. Within this region are 20 named ponds, ranging in size up to 109 acres and in depth to 55 feet below sea level with surface elevations from 6 to 9 feet above sea level. Attractive, too, are the valleys of the Pamet and Little Pamet Rivers, which lie north of the ponds amidst the most vigorously rolling topography of the area.

South Wellfleet Plains In South Wellfleet and North Eastham, a relatively level plain extends from Route 6 to the sea cliff. This plain has pitch-pine as it predominant cover.

Nauset Marsh South of the pitch-pine covered plain lies an area of rolling hills around Salt Pond Bay and Nauset Marsh. Within this area the outwash plain joins the eastern tip of the Sandwich Moraine. Here, the typical vegetation is that of old fields, with juniper, the most noticable tree. The central feature of this portion is Nauset Marsh, with its abundant wildlife and distinctive ecology.

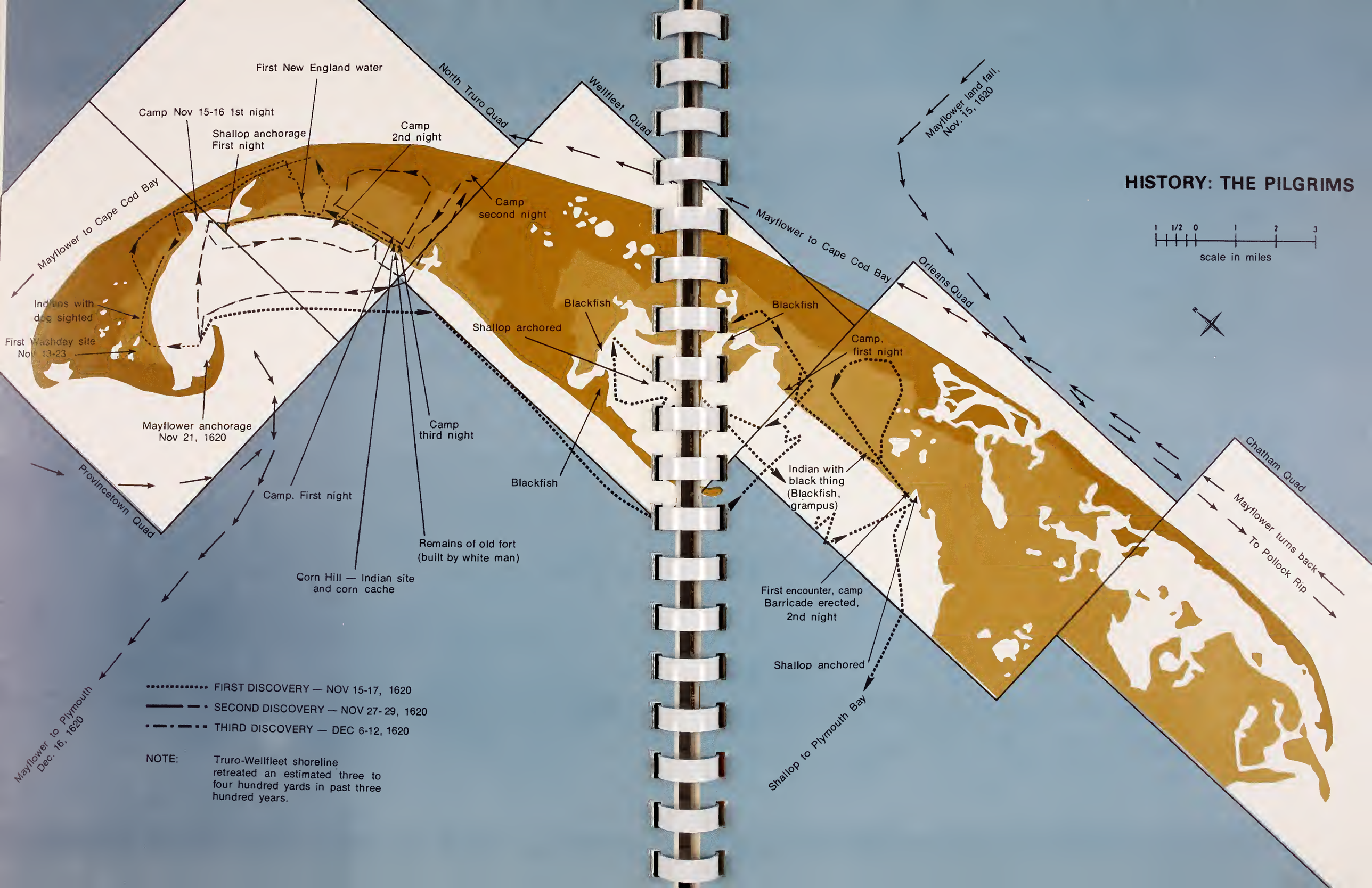
1. BEECH FOREST — rare, most highly advanced climax vegetation in the seashore.
2. Sand dunes — largely unvegetated.
3. SUNKEN FORESTS — pitch pine, cranberry bogs covered by advancing dunes.
4. Extensive marsh — dense stand of cattails.
5. Cranberry bogs
6. PAMET RIVER — valley formed from outwash channel connecting series of kettles; type area for origin of glacial term "PAMET"; fresh water marshes.
7. HILL 177 - highest point in the seashore.
8. HERRING RIVER — outstanding example of fresh water marsh
9. Beech woods (rare) with maple and pine
10. GREAT POND — unusual kettle pond in which currents have formed sand bars to cut off four coves
11. Glacial kettles — covered by plum-pine
12. White cedar swamp.
13. FRESH BROOK — Concentration of riparian vegetation
14. EASTHAM BOG AREA — Blueberry — azalea swamps and leatherleaf-pine stands
15. Glacial till exposed
16. EASTHAM KAME AREA — Old fields invaded by red cedar
17. DOANE ROCK — geological site — glacial boulder of great size.
18. Buttonbush bog
19. Beach grass and beach pea dunes
20. NAUSET BEACH AND MARSH — example of barrier beach and resulting formation of salt water marsh, dunes, nesting site of roseate and arctic terns
21. Tidal flats with heavy concentration of shorebirds.
22. POCHET ISLAND — relatively undisturbed island environment and biological area
23. Tidal flats with heavy concentrations of shore birds.
24. HATCHES HARBOR — Salt to fresh water ecology resulting from old dike. Site of dead pine plantation resulting from area being reinundated by salt water after being dry for years.
25. PROVINCELAND PONDS — Wildlife habitats, swamps and profusion of wading plants.
26. LONG POINT — Recurved sand spit, classic example of ocean currents at work and deposition of new lands. Excellent salt spray rose area. Nesting gull colonies.
27. Highbush blueberry swamp, azalea swamp being obliterated by advancing dunes. Only occurrence of bunch-berry (northern relic.)
28. Geological area. End of outwash.
29. Bearberry heaths, rolling kettles topography, best scrub barrens in the seashore.
30. Glacial topography (kettles), relatively clear of dense vegetative cover.
31. PARADISE HOLLOW — almost pure red maple, extensive ground cover of ferns.
32. WELLFLEET HARBOR — classic example of tombolos connecting the former islands of Bound Brook, Griffin Great Island and Great Beach Hill to the Mainland, ends in Jeremy Point.
33. GREAT ISLAND NATURAL AREA — virtually undisturbed natural area, pine forest, heaths, salt marshes, fine elongated sand spit, oyster beds.
34. HERRING RIVER — only estuary in the seashore.
35. SALT POND — only kettle in the area connected to the sea.
36. Red maple swamp

NATURAL HISTORY



ENTIRE OUTER BEACH OF CAPE COD — one of the finest and least disturbed seashores remaining on the Atlantic coast. Shore and off-shore birds of great variety and sometimes in great numbers may be found here. Seaweed flats and tidal refuse; exposed glacial deposits; evidence of ocean currents in changing the coastline.

HISTORY: THE PILGRIMS


First New England water
Camp Nov 15-16 1st night
Shallop anchorage First night
Camp 2nd night
Camp second night
North Truro Quad
Wellfleet Quad
Mayflower land fall, Nov. 15, 1620
Mayflower to Cape Cod Bay
Mayflower to Cape Cod Bay
Orleans Quad
Chatham Quad
1 1/2 0 1 2 3
scale in miles
Indians with dog sighted
First Washday site Nov 13-23
Blackfish
Blackfish
Shallop archored
Camp, first night
Mayflower anchorage Nov 21, 1620
Camp third night
Blackfish
Indian with black thing (Blackfish, grampus)
Provincetown Quad
Camp. First night
Remains of old fort (built by white man)
Corn Hill — Indian site and corn cache
First encounter, camp Barricade erected, 2nd night
Shallop anchored
Shallop to Plymouth Bay
Mayflower turns back
To Pollock Rip
Mayflower to Plymouth Dec. 16, 1620
FIRST DISCOVERY — NOV 15-17, 1620
SECOND DISCOVERY — NOV 27-29, 1620
THIRD DISCOVERY — DEC 6-12, 1620

NOTE: Truro-Wellfleet shoreline retreated an estimated three to four hundred yards in past three hundred years.

everywhere in evidence. The solid, ground-hugging Cape Cod houses, the old fields, the abandoned but still visible Kings Highway, the fishing shacks, the light houses and Coast Guard stations, the ship wrecks occasionally exposed by shifting sands, the old cemeteries with their memorials to the many men lost at sea, the abandoned cranberry bogs, all bespeak and interplay between man and his environment so marked on Cape Cod. Even such latter day events as Marconi's early wireless messages and the development of tourism are represented by substantial physical remains.

Thus, while Cape Cod National Seashore is relatively small, variables in its geologic makeup, its varied plant communites, and the constant changes engineered by the tides, wind, water and man have endowed it with an extraordinary variety of scenic, historical and recreational features. These features in combination make the Cape strikingly different from any other seacoast region, and impart a distinctive "Cape Cod" atmosphere. It was to preserve these resources and insure their availability for public enjoyment in perpetuity that the National Seashore was created.

1. Portland Wreck — 1898
2. Site, Somerset Wreck (British warship) — 1778
3. Remains, Peaked Hill Coast Guard Station
4. Site, Massachusetts Humane Society Hut — 1800
5. Site. Grist Mill
6. Highland Lighthouse - 1857
   Thoreau stop — 3rd night °(Oct. 12)
   Great Beach hike (1849)
7. Site, Rev Wm. Avery (1st minister — 1712-1756)
8. Shebnah Rich house
9. Oysterman house
   Thoreau stop — 2nd night (Oct. 11)
   Great Beach hike (1849)
10. Wreck of Whioah (pirate ship) — 1717
11. Marconi Station — site of first station built for trans-atlantic wireless communication — 1902
    First wireless message from U.S.A to England — 1903 (Theodore Roosevelt to King Edward VII)
12. Fresh Brook Village Site
13. Nause Beach Lighthouse (site of "Three Light")
14. Site — Deacon Doane house — 1644
15. Site, Massachusetts Humane Society Hut — 1800
16. Henry Beston's "Outermost House" — 1927
17. Site — Salt Works
18. Site —Governor Prence house ("White House" Of Plymouth Colony 1657 — 1665)
19. Capt. Penniman house (whaling captain)
20. Putative Site — Champlain's landing and Indian encounter — 1605
21. Original site of windmill
22. Site, Massachusetts Humane Society Hut — 1800
23. German submarine fired on beach — 1917
24. Site, Massachusetts Humane Society Hut — 1800
25. Hog Island (possible site of Captain Kidd's treasure)
26. Putative site — Anchorage of Bartholomew Gosnold — 1602
27. Site — Sparrowhawk wreck-1626
28. Old Harbor Coast Guard Station site
29. Joseph C. Lincoln house
30. Chatham Lighthouse — 1856
31. Site — E. Dyer's Salt Work
32. Submarine S-4 disaster — Dec. 1927
33. Civil War forts
34. "Hill of Storms", graveyard
    Site of first meeting house — 1708-09
35. Pamet Harbor — center of fishing activity — 1830-60
36. Hill of churches
37. Site — first Methodist Church (2nd oldest Methodist Church in New England
38. Old fishing wharf
39. Unidentified wreck
40. Site — old oyster shell burning building
41. Site — trading post
42. Site — Humane Society Hut
43. Site — old Billingsgate Lighthouse
44. I.D. Baker house (merchant mariner; founder of United Fruit Co.)
45. Remains — Oystermen's Shack
46. Site — old Methodist Church campgrounds — 1828-63
47. Capt. Freeman Hatch house
48. Prince Hurd house (British prisoner of war — 1812)
49. Old mill — 1793
50. Site — Jeremiah's gutter (first Cape Cod canal)
51. "Battle of Rock Harbor" (militia prevented British landing — Dec. 1814)
52. Capt. Linnell house — 1833
53. Office of French Cable Co. — 1899
    Direct line between Orleans and France
54. Site — Higgins Tavern
    Thoreau stop — 1st night (Oct. 10)
    Great Beach hike (1849)
55. Capt. Kendrick house (pioneer mariner — Pacific northwest 1790)
56. Site — salt works
57. Burial site — Squanto (friend of the Pilgrims)
58. Site —Grist Mill — 1797
59. Putative site. Champlain's camp and Indian attack — Oct. 1606
60. Remains — Chatham Coast Guard Station
61. Remains — Stage Harbor Lighthouse
62. Site — Cable and hut for French Atlantic Cable — 1879 (Extension from St. Pierre)

HISTORY

GRAVEYARD OF SHIPS

NORTH TRURO QUAD

WELLFLEET QUAD

ORLEANS QUAD

CHATHAM QUAD

PROVINCETOWN QUAD

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62

1 1/2 0 1 2 3

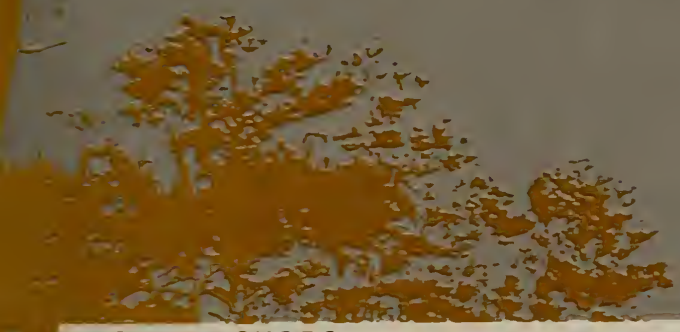
scale in miles

LEGEND

THOREAU BEACH HIKE — 1849

KING'S HIGHWAY

Factor Affecting Resources And Use



LEGAL FACTORS

Legal Factors The Act of August 7, 1961, authorizing the establishment of Cape Cod National Seashore (75 Stat. 284) is distinctive in several respects. It provides for expenditure of public funds for initial acquisition of land. It provides for the establishment of an Advisory Commission and sets forth certain functions to be served by it. An extremely significant section (the "improved property" clause) provides a procedure for preparation of zoning standards by the Secretary of the Interior and the adoption of zoning regulations by the towns, compliance with which serves to suspend the goverment's power to condemn dwellings built prior to September 1, 1959.

Other especially significant features in the Act of August 7, 1961 are listed as follows:

- Property owned by the Commonwealth or towns may be acquired only with the consent of the owner.
- Authority for the Secretary to exchange Federally owned lands for other lands within the boundary is given.
- Owners of non-commerical residential property may retain use of such property for terms of 25 years or life should the property be subject to condemnation.
- The Secretary may adopt regulations concerning hunting and fishing, subject to consultation with the Commonwealth and towns and the stipulation that all aspects of the propagation and taking of shellfish shall be left to the towns.

Section 7 of the Act is quoted in the Objectives, its requirement that the Seashore shall be permanently preserved in its present state is reinforced in two other places:

Section 5 (b) which in part provides that *the standards specified in such regulations and amended regulations for approval of any zoning bylaw or zoning bylaw amendment shall contribute to the effect of *** promoting the preservation and development, in accordance with the purposes of this Act, ****

Section 8 (g): *No permit for the commercial or industrial use of property located within the seashore shall be issued by the Secretary, nor shall any public use area for recreational activity be established by the Secretary within the seashore, without the advice of the Commission ***"*

The Act authorized the appropriation of such sums as may be necessary to carry out its provisions, except that no more than $16,000,000 shall be appropriated for the acquisition of lands and waters. This ceiling has been reached; legislation to increase it has been introduced.

Cape Cod National Seashore was formally established by publication of notice of its establishment in the Federal Register on June 1, 1966.

Jurisdiction is proprietary and the Federal Government is limited to enforcement of rules and regulations established by the Secretary on lands administered by the National Park Service and owned by the Federal Government. The police power is exercised by the Commonwealth of Massachusetts and its political subdivisions.

Massachusetts has donated 5,402 acres: the former Provincelands Reservation and Pilgrim Springs State Parks. It has donated off-shore lands and jurisdiction over great ponds only in the town of Provincetown and Truro.

Certain properties were acquired subject to deed restriction. These restrictions are on file in individual tract folders but have not yet been summarized in list form. Water rights acquired by the Government will require inventorying, documenting, and perfection in the name of the United States.

CLIMATE

Cape Cod's maritime climate is less severe during the extreme seasons of winter and summer than that of nearby inland regions. Seasons tend to be slower in arriving and linger longer.

Prevailing winds are southwesterly in summer and northwesterly in winter.

Severe storms occur and are of two types:

Northeasters, with very strong winds and heavy rain and snow, can produce adnormally high winds-driven tides which erode the beaches.

Storms of tropical origin, with winds of hurricane force, may be expected in summer and fall. One occurs about every two years. Two such storms in the same year may be expected once in 8 to 10 years. Like northeasters, they may be accompanied by heavy rains and high tides.

Cape Cod lies in the transition fog zone, where heavy fog is frequent and sometimes persistent south of Cape Cod and less frequent and of shorter duration along the coast north of Cape Cod. Summer fogs over the Seashore normally burn off by 11:00 a.m.

The sand spits are vulnerable to overflow and erosion and their occupancy by humans, structures, or equipment at such times can be disastrous. Blowing sand during storms can be devastating to man and equipment. Frosting of glass by blowing sand is a problem where sand movement is frequent.

Cool wet summers occur once every four or five years. Such a season in 1967 resulted in a 40 percent decrease in beach use as compared with the previous season when near ideal conditions prevailed.

Construction season is year-round.

FIRE HISTORY

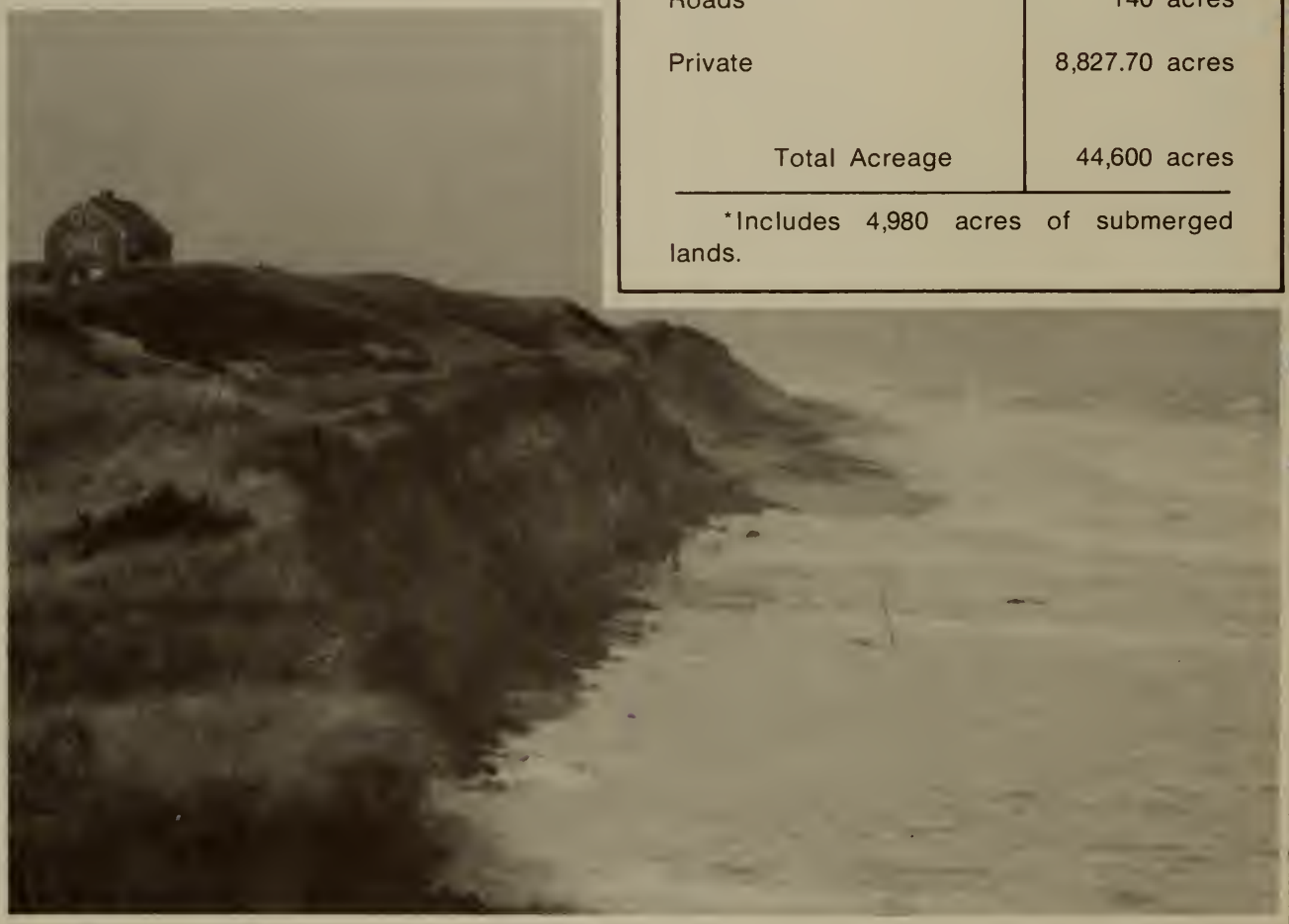
An average of 20 woodland fires, primarily man-caused, occur annually at Cape Cod National Seashore. Efficient fire control by town departments under cooperative agreement with the National Park Service has kept the area burned to an average of 15 acres a year since 1964. The normal fire season is April through November. High winds, dry soil, scrub forests, brush thickets and deciduous vegetation create extremely dangerous fire conditions from mid-April through mid-June and during October and November.

One or two woodland fires of more than 500 acres occur each year on Cape Cod. These fires threaten not only the vegetation but also property and lives in this thickly settled area.

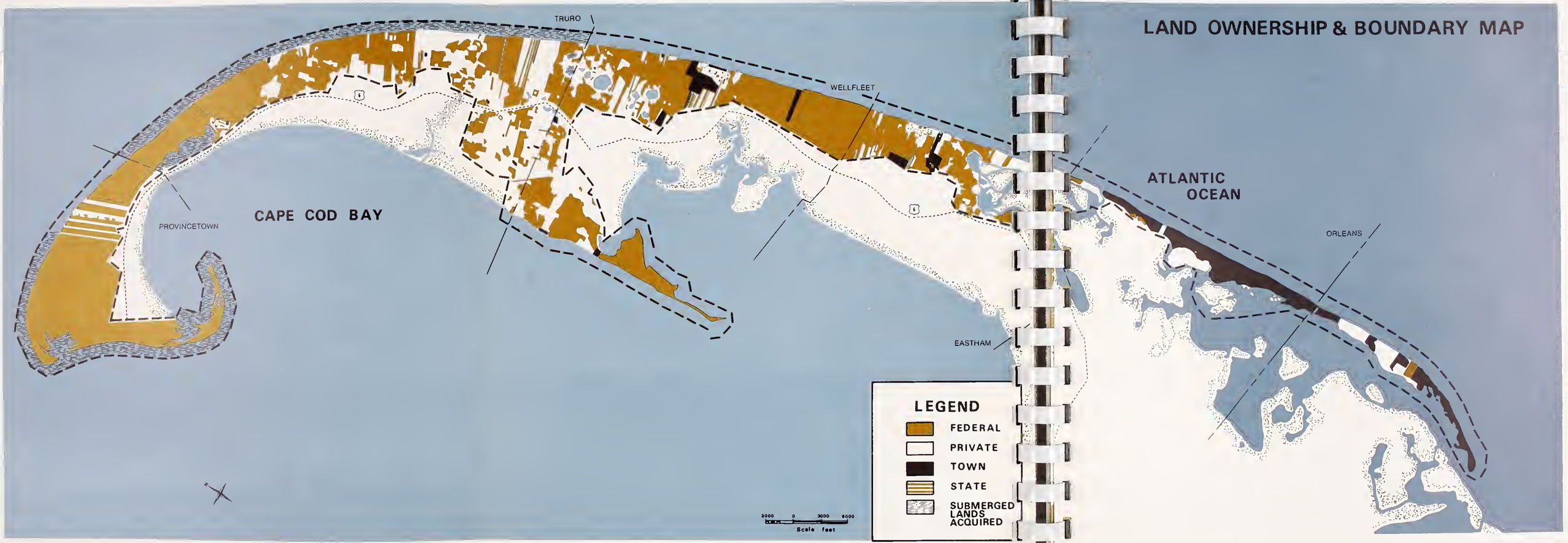
LAND STATUS

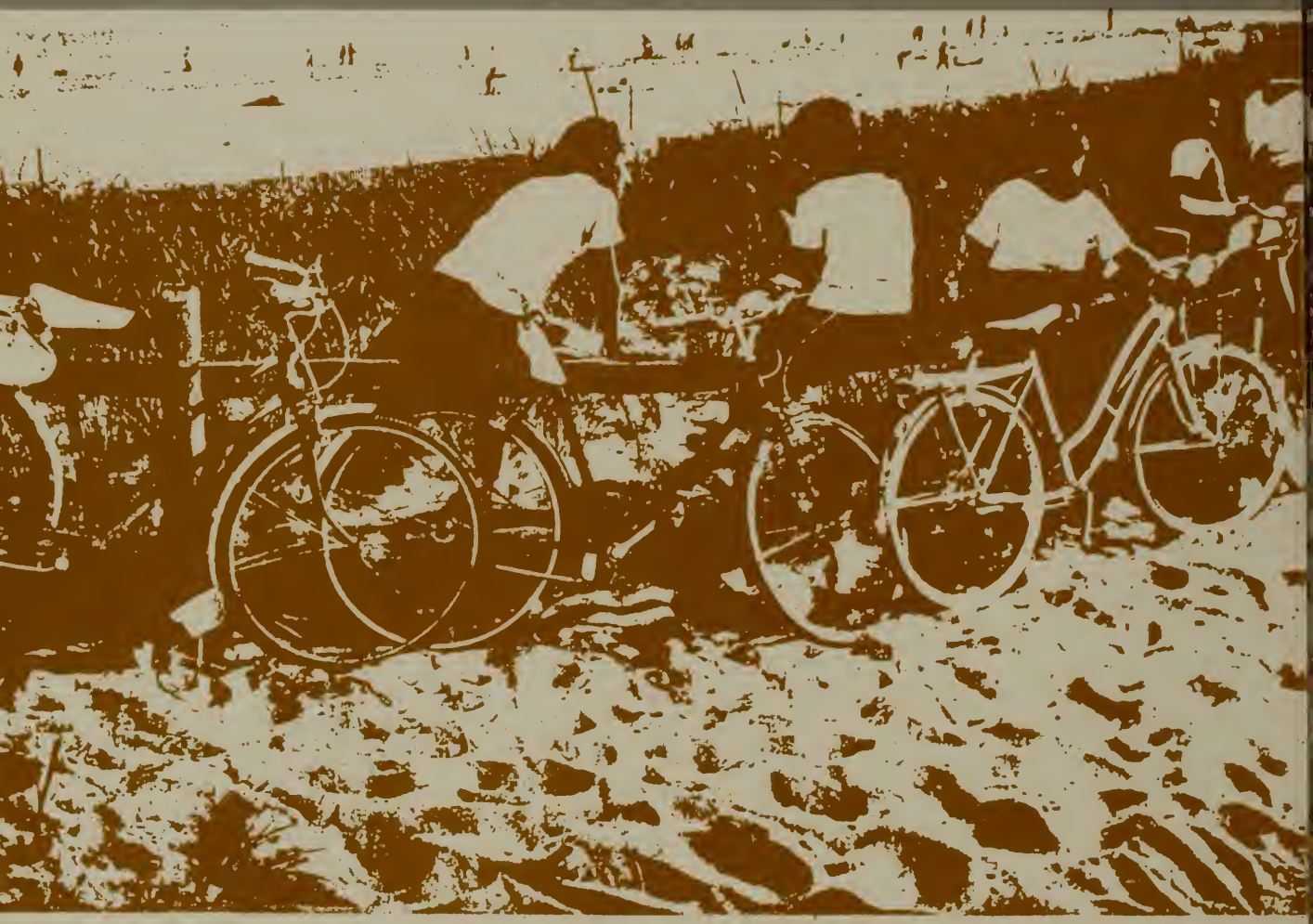
Federal	
National Park Service	21,391.30 acres
Department of Defense	129 acres
U.S. Coast Guard	40 acres
Total Federal	21,560.30 acres
State	
Submerged lands	11,970 acres
Town	2,100 acres
Roads	140 acres
Private	8,827.70 acres
Total Acreage	44,600 acres

*Includes 4,980 acres of submerged lands.



LAND OWNERSHIP & BOUNDARY MAP





Visitor Use Of Resources

With such exceptions as the three private campgrounds, two motels and some room or cottage rentals, no overnight accommodations are provided within the Seashore. In effect, all use is day use, much of it by permanent or temporary residents.

As a result, the use pattern is complex. Many visitors are repeat visitors who know what facility or facilities they wish to use, go to them, use them, and depart.

All visitors arrive at the Seashore over State or town roads. Those arriving for the first time get an introduction to the geology, history and natural history of the Seashore, and information about what to see and do at the Salt Pond Visitor Center. Others stop for information at Park headquarters.

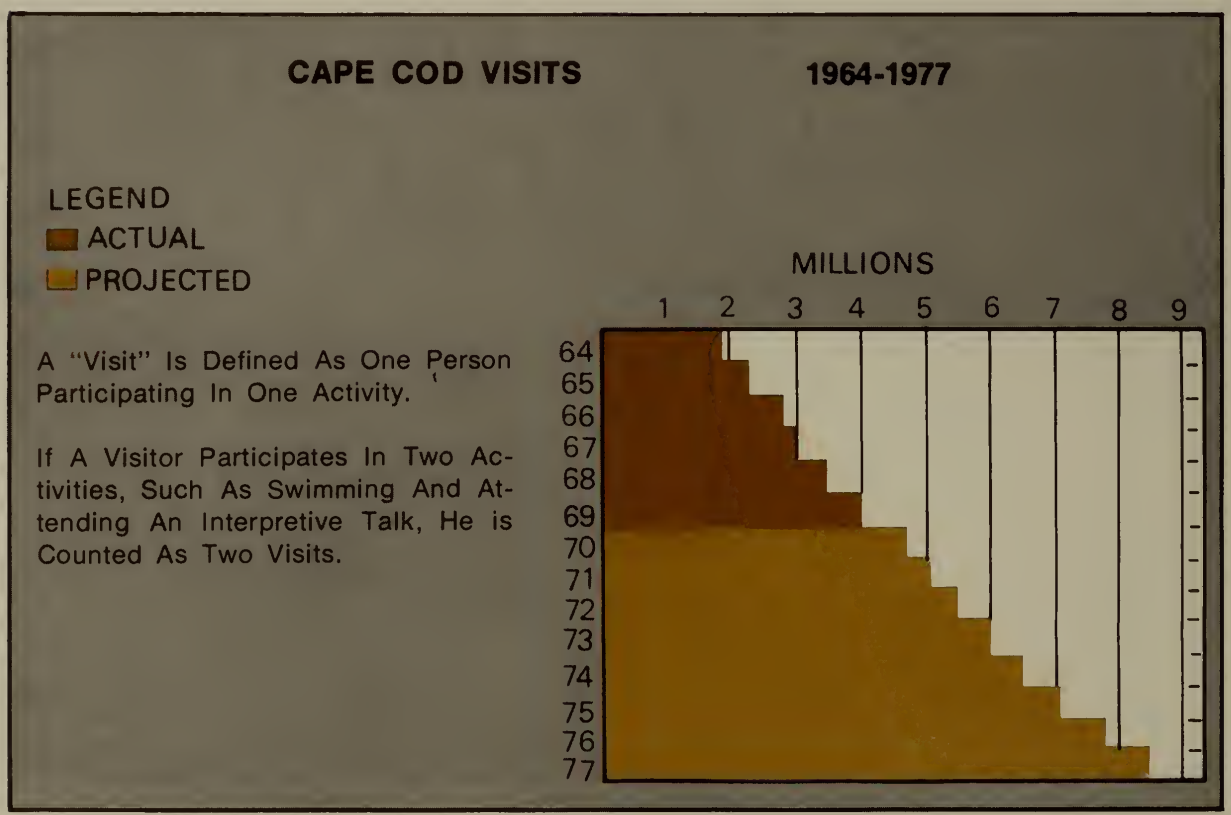
Once oriented, the visitor proceeds in one of two ways. If he is a day user from up-Cape or off-Cape, he proceeds to the facility he has chosen and spends most of his time there. Since Coast Guard Beach is the first beach such users encounter, it fills to capacity on most warm, sunny days, and turns away potential users on every good summer weekend.

If the visitor is staying near the park, he may well use the full range of facilities and services open to him. Depending upon the

length of his stay, his family circumstances and interests, age, the weather and so forth, he may rent a bicycle and use the park bicycle trails, or explore a nature trail or take a guided nature walk. He may visit the Provincelands Visitor Center to gain a deeper acquaintance with the history and climate of the Cape, or attend an evening program. He may explore the Cape and enjoy its scenery by car over the network of town and State roads. Almost certainly, he will use a town or Federal beach, though he will probably not drive more than five miles from his lodgings to do so. Partially because of this fact, Herring Cove and Race Point beaches, drawing from the concentrated summer population of Provincetown, fill up on pleasant weekends, while Head of the Meadow Beach, less than a dozen miles away, has not yet reached three-quarters of its capacity.

Still other possibilities are open. If he owns a four-wheel drive vehicle, the visitor may use over-the-sand routes to explore the dunes or get to a favorite surf-casting spot. If the visitor is young, he may surf. He may stroll the outer beach collecting shells, or hunt, or dig for clams. Usually he will engage in several of these activities, in the meantime using the other services and facilities available on the Cape.

All of these uses are compatible, though some, such as hunting and use of over-sand vehicles, are not compatible in all areas, and others, such as surfing, cannot be missed with other types of use. Public use figures for many of these activities are not available. However, in 1969, 1,490,167 people used Federal beaches, 22,873 went on conducted trips, 31,849 attended evening interpretive talks at the visitor centers, and 612,692 used Salt Pond and Provincelands Visitor Centers.



The Plan

INTRODUCTION

The resources of Cape Cod National Seashore are the product of the interplay of natural processes and man's activity. These resources will inevitably be altered by the continuing interplay of natural forces; and, therefore, cannot literally be preserved in their present state. However, these resources and the forces which continue to shape them can be protected from abuse and alteration by man through proper management.

This plan is based in the concept that the resources of Cape Cod National Seashore can be protected from man's abuse and, at the same time, that the Seashore can provide opportunities for certain types of outdoor recreation for its visitors. This can be done by distributing developments and use so as to avoid overloading any given resource or segment of the Seashore, by providing for use of all resources in balance with their capability to be used without damage, and by providing for only those uses for which Seashore resources are well-suited, relying on other areas of the National Park System and on State, local and private agencies to provide for those uses which the resources of the Seashore cannot well accommodate.

Two factors are fundamental to this concept. The first is an understanding of "use." Viewing a marsh or a patch of mosses and lichens from an interpretive road or a bicycle path is as much a use of that resource as swimming or sunbathing is a use of the beach and ocean. Being viewed is the only use some of the more fragile resources of the Cape can accommodate. Second, while proper planning, development and operation can permit fuller utilization of the capacity for use of a given resource, it cannot increase the innate capacity for use. For example, a well-designed, carefully located boardwalk can permit far more people to go out into and enjoy viewing a marsh than could do so if the boardwalk were not provided. However, a given marsh can accommodate only so much boardwalk, and can be used for only nature study and scenic appreciation. Too much boardwalk or an attempt to use the marsh for a purpose other than nature study or scenic appreciation will, in the long run, destroy it. The same principle applies to each Seashore resource individually, and to Seashore resources collectively. Hence, the Seashore has an optimum capacity, which cannot be exceeded.

USE CAPACITY

Any natural resource — a marsh, an acre of woodland, a beach — has an optimum use capacity; an ability to be used by a given number of people for a given purpose or purposes without being destroyed by the use and without being overcrowded. The same is true for any given assemblage of resources, and hence for Cape Cod National Seashore.

Objective standards by which to determine an optimum, or ideal, use capacity of a given resource or assemblage of resources have not yet been developed. Until they are, an optimum resource use capacity cannot be determined. As a result, the ideal use capacity of area facilities is used as a measure of the desired Seashore visitation limit. This figure is the design load of the facilities and represents the number of people the facility can serve before it would be overloaded or damaged. The Seashore's facility use capacity is determined by first deciding what facilities for visitor use can be provided which in themselves would not damage the natural resources and then determining the design load of these facilities.

The capacity of the facilities recommended in this plan, or the design load, is 24,000. That is, assuming that town beaches and private campgrounds within the Seashore boundary stay at or near their present capacity, and assuming further that every parking lot and private campground were full, and that the proposed trails were carrying heavy traffic, 24,000 people could use the existing and proposed facilities at one time. Using a daily turnover factor of two (assuming that every five hours a completely new set of people replaces the old set on the bike trails and the beaches) the daily facility use capacity of the Seashore is 48,000.

This capacity is less than the resources of the Seashore can absorb without damage, but it is probably not much less as long as visitor parking is provided within walking distance of the beach or visitor center it serves. If the percentage of visitors using the Seashore in July and August remains as it was in 1966, and the projections of future use are accurate, by 1975 the number of people seeking to visit the Seashore in July and August will exceed the capacity of existing and planned facilities.

This possiblility is not so immediate as it appears at first glance. In the first place, the estimates of capacity presented above were kept low; daily facility capacity is probably somewhat higher than 48,000. Second, there is some reason to doubt that the projections of visitor use are altogether accurate. Most visitors to Cape Cod National Seashore are staying in permanent or seasonal homes, or in motels, campgrounds or rental cottages, and it is unlikely that the dwelling, motel, campground and rental cottage capacity will expand rapidly enough to support the projected increase in visitor use. Nor will the existing access roads handle an increase of this magnitude. Nevertheless, the time may come when more visitors will wish to come in July and August than the Seashore's facilities can accommodate. In several of the sections which follow, actions to meet this situation are recommended.

ACCESS AND CIRCULATION

Existing access and circulation were described earlier in the report. Both access and circulation are inadequate and require improvement.

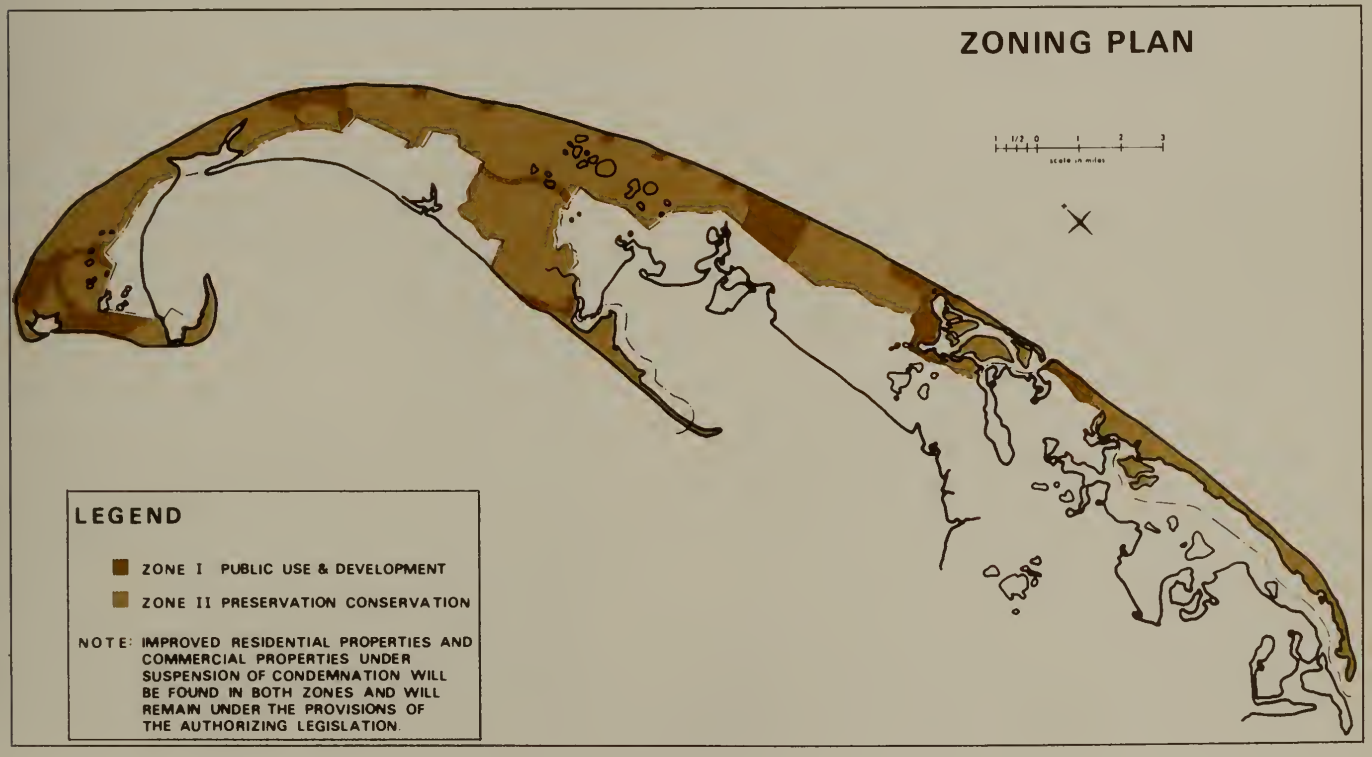
Access to the Cape Access from the northeastern seaboard megalopolis to the Cape Cod Canal will be excellent when the various Interstate, United States, and State highways now being planned are completed. Access across the canal is inadequate. The two bridges back up traffic for several miles on busy weekends. Route 6 provides adequate access between the canal and Provincetown where it is four-lane divided, limited access,

LAND CLASSIFICATION

LEGEND	ACRES
CLASS 1- HIGH DENSITY RECREATION AREAS	0
CLASS 2- GENERAL OUTDOOR RECREATION	4400
CLASS 3- NATURAL ENVIRONMENT AREAS	21800
CLASS 4 OUTSTANDING NATURAL FEATURES	450
CLASS 5B PRIMITIVE AREAS	770
CLASS 6 HISTORIC AND CULTURAL SITES	240
UNCLASSIFED - ROUTE U S 6 R O W	40
TOTAL	27,700

• 80 SITES AT 3 ACRES PER SITE FOR LOCATION SEE HISTORIC ARCHITECTURE DRAWING

ZONING PLAN



LEGEND

- ZONE I PUBLIC USE & DEVELOPMENT
- ZONE II PRESERVATION CONSERVATION

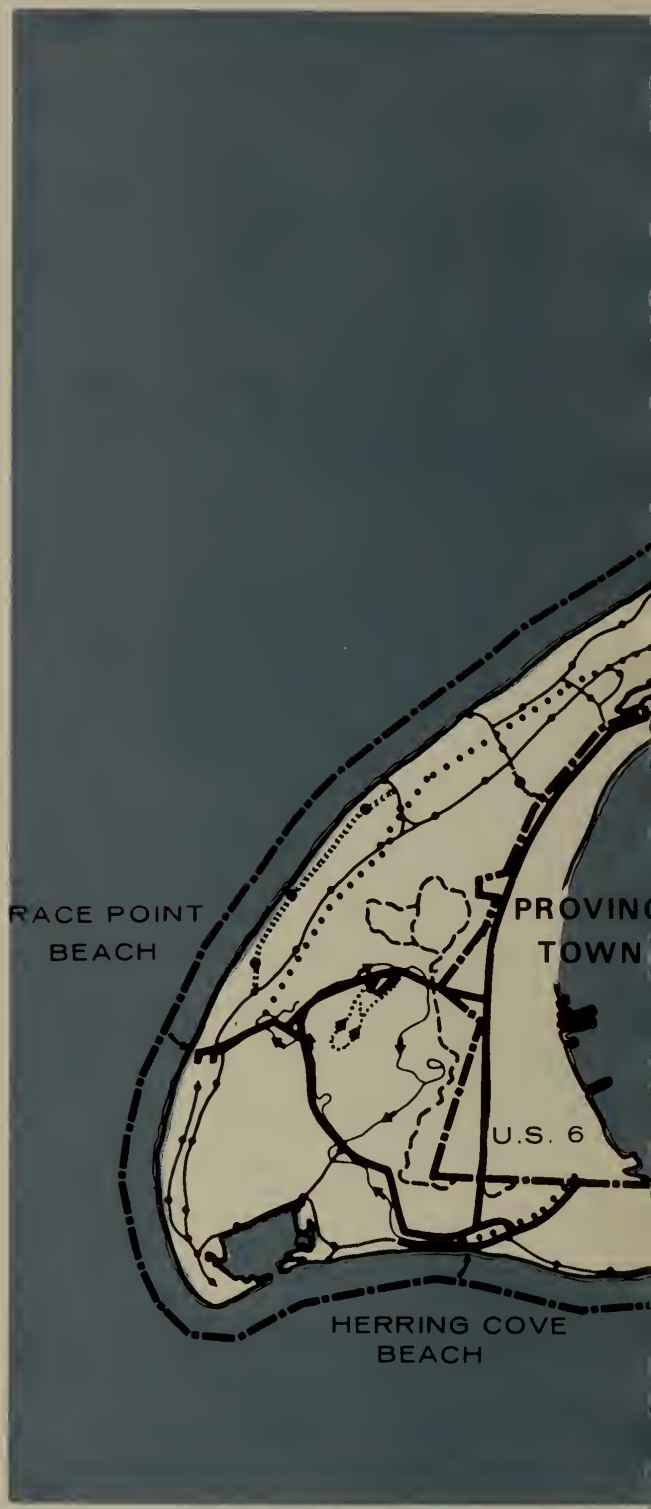
NOTE: IMPROVED RESIDENTIAL PROPERTIES AND COMMERCIAL PROPERTIES UNDER SUSPENSION OF CONDEMNATION WILL BE FOUND IN BOTH ZONES AND WILL REMAIN UNDER THE PROVISIONS OF THE AUTHORIZING LEGISLATION.

but the two-lane and four-lane undivided portions cannot handle peak traffic loads and the three-lane portions are very dangerous, particularly when traffic is heavy. Access by public transportation, while perhaps adequate to meet existing demand, doesn't begin to provide the service or carry the people that it should to provide the Cape with a balanced access and an alternative to the private car.

The National Park Service has no authority to finance any of these improvements, even though they directly affect the Seashore. Indeed, public transportation improvements, if they involved rights-of-way within the Seashore or expansion of Provincetown Airport, might conflict with the purpose of the Seashore. However, the Service should work with the agencies concerned—the Cape Cod Planning and Economic Development Commission, the Massachusetts Department of Public Works, the Bureau of Public Roads, the Corps of Engineers and the towns—to expedite needed improvements.

In doing so, the Service should encourage the various planning agencies to consider the optimum capacity of the Seashore and of Cape Cod as a whole, and keep access in balance with that capacity. The Cape is an island separated from the mainland by the Cape Cod Canal. If and when more visitors come than the Cape can absorb, the canal and its crossings will become the point at which access can be controlled and limited.

Access to the Circulation within the Seashore As the sketch shows, Route 6 is the key to Seashore access and circulation. Spur roads lead from Route 6 to the various Seashore developments and to town beaches. Some Seashore developments and town beaches form clusters—one in the Coast Guard Beach area, one in the former Camp Wellfleet area, one in the Highland Light area, and one at Race Point. Within



these clusters, the visitor can circulate from one development to another over secondary roads. However, to circulate from one cluster to another, or from one of the unclustered developments to another (from Head of the Meadow Beach to Pilgrim Heights, for example), the visitor must return to Route 6 and drive along it to the access road leading to the place he wishes to visit next. There is no way to move from development to development without leaving the Seashore; there is no internal circulation system.

A road or road system designed to enable visitors to move from development to development without leaving the Seashore is not now necessary. However, the use of Routes 6 and 28 as the take off for spur road access to the Seashore as the connection between segments of the Seashore is not satisfactory at present. First, Route 6 between Orleans and North Truro is dangerous, particularly during heavy traffic periods and to drivers who are not familiar with it. Second, the spur road intersections are often poorly signed and lack adequate sight distance and deceleration lanes, adding to the traffic danger. Finally, there are so many roads off Route 6 that the Seashore visitor is apt to get off on one that leads to a town beach he can't use, or that takes him on a round-about route on low-speed town roads bounded by private property.

The National Park Service should work with local and regional planning agencies and with the Massachusetts Department of Public Works to get better directional signs and safer exists from Route 6 on an interim basis, and to get well designed and properly located access points, with feeder roads if needed, when Route 6 is improved.

Finally, the National Park Service should start planning to supplement access to Seashore developments by private car with public transportation systems. Studies to determine feasibility should be made of:

- An eight-mile system from a parking area near Provincetown and close to Route 6. Such a system would serve the developments in this area, make more beach available for use and eliminate the need for space consuming and intrusive parking areas.

- A shorter system to serve Head of the Meadow Beach. Parking would be provided near Route 6.

- A short system to serve the Camp Wellfleet area. Again, parking would be provided near Route 6.

- A transportation system providing access to the Duck Harbor-Griffin Island-Great Island Area.

Providing adequate access to this part of the Seashore and the facilities proposed within it is complicated by several factors. First, while the area is now accessible over town roads, these roads are narrow, winding, low-capacity roads which pass improved properties. Second, the terrain—rolling "islands" rising amid marshland—makes additonal road construction difficult and undesirable. Third, no additional motor traffic through the village of Wellfleet should be encouraged. Finally, the town of Wellfleet is not enthusiastic at the prospect of increased traffic on the town roads it patrols and maintains.

A public transportation system providing access to developments in this segment of the Seashore and giving the visitor views of the wetlands and wooded "islands" might resolve these problems. Perhaps the existing sand road which skirts the south side of Duck Harbor from Old County Road to Cape Cod Bay could serve as a route.

PUBLIC CONTACT, INFORMATION AND FEES

Contact and Information The visitor is first contacted at the Salt Pond Visitor Center,

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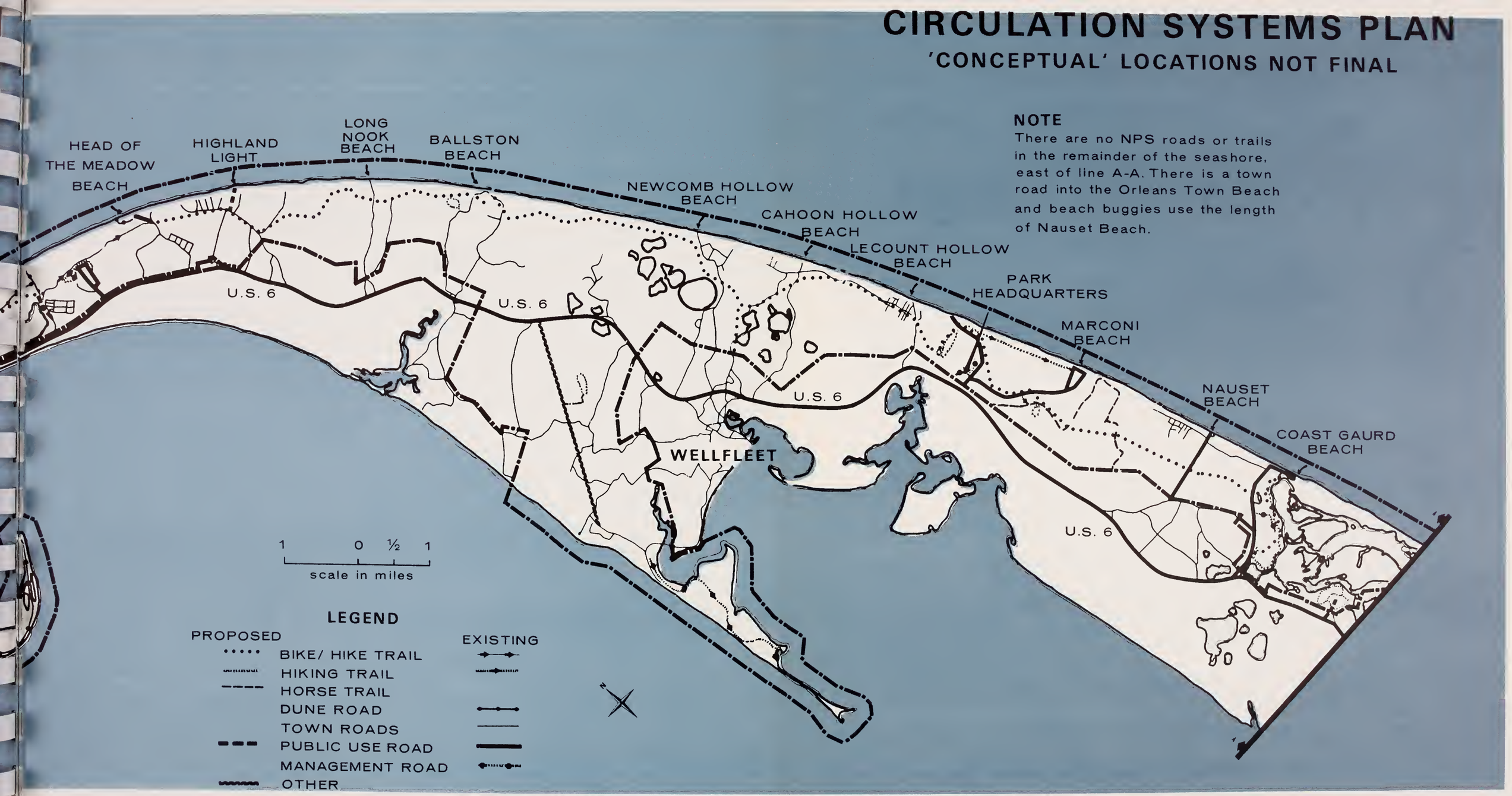
CIRCULATION SYSTEMS PLAN

'CONCEPTUAL' LOCATIONS NOT FINAL



NOTE

There are no NPS roads or trails in the remainder of the seashore, east of line A-A. There is a town road into the Orleans Town Beach and beach buggies use the length of Nauset Beach.

Park Headquarters, or the first manned facility he uses. Information on what to see and do is presented through signs, exhibits and literature at the Salt Pond Visitor Center, through personal contacts by the Seashore staff, and through local news media. Information of this type will also be provided at the Provincelands Visitor Center and the proposed Bayside developments.

Cape Cod has long been attracting summer visitors. Information on tourist facilities and services is readily available through a network of Chamber of Commerce and town information booths, promotional literature, newspapers, hotels, motels, restaurants, and so forth.

All aspects of this program are satisfactory. However, an information program designed to inform potential visitors when such recreational facilities as beaches and campgrounds are filled and to direct them to alternate facilities either elsewhere on the Cape or off the Cape is needed. This need is further discussed under Resource Management below.

Fees Parking fees are collected upon entrance to major beaches—the only user fees now charged. Eastham residents are exempt from these fees at Coast Guard and Nauset Light Beaches by terms of the deed of gift.

Entrance fees are not now practicable. They may become so if and when major developments are accessible by roads over which the National Park Service has jurisdiction. At that time, entrance fees should be considered.

RECREATION

Swimming and Beach Use The 39-mile sweep of Atlantic Beach and the 6 1/2 miles of Bayside Beach is the single most important resource for active outdoor recreation within the Seashore. It is a resource without equal in the Northeast. Swimming and beach use is the single most popular and most important active recreational use within the Seashore. It is a use for which demand is increasing rapidly. Hence, the distribution, location, design and capacity of facilities to support this use are critical to maintaining a correct balance between preservation and use within the Seashore.

Several factors influence the distribution, location and capacity of beaches. First, almost all the pamets and other natural access points across the dunes or down the bluffs to the beach were long ago acquired by the towns and put to use as town beaches. Almost all remains in town ownership. Second, the beaches of the Cape should provide for a wide range of recreational use, ranging from developed beaches for extensive use, through small, relatively undeveloped beaches for those who prefer a less crowded experience, to long stretches of beach for beachcombing, strolling, and the experience of getting away and, as Thoreau stated, putting all America behind. Third, such other uses of the beach as surf-casting and beach buggy driving should be provided for. Fourth, the amount of parking required to support intensive beach use can be provided only in certain locations, and at these only to a certain extent, because of the terrain, natural features and improved properties behind the beaches. Fifth, most of the access roads from Route 6 are intimate, charming, low-capacity roads bordered by improved properties. These roads cannot handle the traffic generated by a major beach unless they are widened and straightened.

This plan recommends that the Seashore provide seven developed beaches for more or less intensive use. Of these, six exist. In addition, Orleans provides a developed beach at Nauset which is not restricted to townspeople.

Existing town beaches provide the necessary smaller, less developed beaches. Several towns restrict use of their beaches to town residents or guests. This excludes the

1. RACE POINT BEACH ●
   - ■ Parking — 300
   - ■ Bath House
   - ■ Beach Duggy access
2. PROVINCELANDS ●
   - ■ Parking — 250
   - ■ Bike Trail access
   - ■ Visitor Center
   - ■ Amphitheater — 750
   - ■ Outside Exhibits
3. HEAD OF THE MEADOW BEACH ●
   - ■ Bath House
   - ■ Parking — 367
4. HEAD OF THE MEADOW — TOWN BEACH ○
   - ■ Parking — 40
5. HIGHLAND — TOWN BEACH ○
   - ■ Parking — 100
6. HIGHLAND LIGHT COMPLEX ●
   - ■ Golf Course — Concession
   - ■ Highland House
   - ◉ Interpretive Overlook
7. LONGNOOK — TOWN BEACH ○
   - ■ Parking — 45
8. CRANBERRY BOG. ●
   - ◉ Restoration
   - ◉ Interpretive Trail
   - ◉ Parking — 50
9. PAMET VALLEY ●
   - ◉ Interpretive Exhibit
   - ◉ Parking — 25
10. BALLSTON — TOWN BEACH ○
    - ■ Parking — 125
11. NEWCOMBS HOLLOW — TOWN BEACH ○
    - ■ Parking — 200
12. CAHOON HOLLOW — TOWN BEACH ○
    - ■ Parking — 75
13. TOWN SURFING BEACH ○
    - ■ Parking — 50
14. LE COUNT HOLLOW ○
    - ■ Parking — 50
15. MARCONI STATION ●
    - ■ Exhibit Shelter
    - ■ Comfort Station
    - ■ Parking — 30
16. MARCONI BEACH ●
    - ■ Parking — 528
    - ◉ Bath House
    - ◉ Parking expansion — 1000
17. WHITE CEDAR SWAMP ●
    - ■ Parking at Marconi Station
    - ■ Environmental Study Area
    - ■ Interpretive Trail
18. CAMP WELLFLEET ●
    - ■ Information
    - ■ Residence Area
    - ■ Administrative Headquarter
    - ■ Maintenance Center
    - ■ Nauset Regional School District
    - ◉ Seasonal Quarters 15 to 20 units
19. FRESH BROOK VILLAGE ●
    - ◉ Interpretive Complex
    - ◉ Parking — 24
20. NAUSET LIGHT BEACH ●
    - ■ Parking — 157
    - ■ Comfort Station
21. NAUSET COAST GUARD STATION ●
    - ■ Parking — 44
    - ◉ Lifesaving Museum in existing Coast Guard Station
22. COAST GUARD BEACH ●
    - ■ Bath House
    - ■ Parking — 355
23. SKIFF HILL — PENNIMAN HOUSE COMPLEX ●
    - ■ Captain Penniman House
    - ■ Parking — 33
    - ◉ Fort Hill scene restoration (1850-1890)
    - ◉ Parking — 15
    - ■ Skiff Hill Shelter and Exhibits
    - ■ Nature Trail
    - ■ Environmental Study Area
24. NAUSET TOWN BEACH ○
    - ■ Parking — 670
25. PROVINCETOWN MUNICIPAL AIRPORT
26. BEECH FOREST ●
    - ■ Parking — 50
    - ■ Picnic Area
    - ■ Bicycle Trail Access
    - ■ Interpretive Trail
27. HERRING COVE BEACH ●
    - ■ Bath House
    - ■ Parking — 750
    - ■ Snack Bar Concession
    - ◉ Complete redesign of bath House and parking facilities — parking expansion to 1500 (contingent on future N.P.S. and Provincetown planning)
28. Boat, Hiking and Beach Buggy Access only
    - ◉ Interpretive Exhibits
29. HIGH HEAD ●
    - ■ Parking — 50
    - ■ Beach Buggy Access
    - ■ Bicycle Trail Access
30. PILGRIM HEIGHTS ●
    - ■ Interpretive Shelter
    - ■ Interpretive Trail
    - ■ Comfort Station
    - ■ Picnicking
    - ■ Parking — 132
31. GREAT HOLLOW BEACH ○

GENERAL DEVELOPMENT PLAN

LEGEND:

- ■ EXISTING
- ◉ PROPOSED
- ● N.P.S. DEVELOPMENTS
- ○ TOWN DEVELOPMENTS
- ——— EXISTING PARK ROAD
- ····· ROAD TO BE OBLITERATED

0 1 2 3
scale in miles

32. CORN HILL BEACH ○
33. PARADISE HOLLOW ●
    - ◉ Interpretive Trail
    - ◉ Parking — 25
34. ATWOOD HIGGINS HOUSE ●
    - ◉ Future parking — 25
    - ◉ Residences — 2
35. DUCK HARBOR TOWN BEACH ○
    - ■ Parking — 75
36. BAY SIDE BEACH ●
    - ◉ Parking — 200
    - ◉ Bath House
37. GRIFFIN ISLAND ●
    - ◉ Parking — 100 cars and 6 buses
    - ◉ Interpretive Center
    - ◉ Trail to Great Island and Herring River Estuary
38. GREAT ISLAND NATURAL AREA
    - ◉ Hiking Trails
    - ◉ Interpretive Overlook
    - ◉ Primitive Comfort Station
39. SALT POND VISITOR CENTER ●
    - ■ Parking — 200
    - ■ Nature Trail
    - ■ Information
    - ■ Orientation
    - ■ Interpretation
    - ■ Bicycle Trail Access
    - ■ Amphitheater — 750
40. NPS SUB-MAINTENANCE & RESIDENCE AREA ●
    - ◉ Seasonal Residences 15-20 Units
41. DOANE ROCK ●
    - ■ Picnic Sites — 25
    - ■ Parking — 25

NOTES:

1. Bicycle and hiking trail are proposed for the length of the National Seashore
2. Location, design, and type of transportation system to the Duck Harbor-Griffin Island area requires further study

day-user from up-Cape or off-Cape. However, the Seashore beaches are available to the day-user and offer some variety in size and intensity of use.

The recommended major beaches and less intensively developed town beaches provide a good balance in intensity of use. Further, the recommendations provide beaches at all sites which are well-suited to this use. The Service, if it is requested to do so, should advise and assist the towns in planning beach facilities and in developing maintenance and operating standards.

The capacities shown on the General Development Plan for the seven Seashore beaches are determined by the capability of the resource to absorb parking. These capacities represent full use of adjacent terrain suitable for parking. The beaches themselves could absorb considerably more use without damage to the resource, without lessening the enjoyment of the user, and without infringing upon other types and intensities of use. This can be achieved by providing central parking with public transportation between parking and beach; the study of such systems is recommended under Access and Circulation. The study should include a determination of the optimum capacity of each beach, and that capacity should not be exceeded. At present, Seashore beaches provide about 12 percent of the total public beach capacity on the Cape. The total Cape beach capacity will be increased, so that when Seashore beaches are developed to their optimum capacity, additional public demand for beach use will be met by other agencies elsewhere on the Cape and elsewhere in the Region.

Pleasure Driving Pleasure driving is a very popular recreational activity, particularly scenic and heavily used roads, pleasure drivers use Routes 6A, 28 and town roads. In so doing, they add to traffic congestion and road maintenance costs and, on certain particularly scenic and heavily used roads, disturb owners of improved properties. Equally important, pleasure driving on roads not designed for the purpose is not a fully rewarding experience. However, very little can be done to solve these problems at present.

Picnicking Picnicking at Cape Cod has proved popular in conjunction with other activities — beach use, hiking, bicycling, nature study — rather than as a separate and distinct activity. The two existing picnic areas should meet the demand for picnicking *per se*. It is recommended that picnic sites be provided as part of a day-use package at beaches and at trail origin points. Provision for informal, passive picnicking should be made at several points, including Marconi Beach. A number of movable tables should be placed on the upper sides of other beaches.

Beach Related Activities Such activities as informal volleyball games, kite flying, and tossing beach balls occur at beaches as an adjunct of beach use. Space for them is provided by informally designating a section of beach for such use as need arises. This program is adequate and should continue.

Camping State parks and private campgrounds on or near the Cape contain over 3,000 campsites. Despite the fact that several towns have zoned out private campgrounds, additional sites are being provided each year. Still, seasonal demand for campsites exceeds the supply.

The glacial outwash and marine deposited soils of the Seashore are not well suited for campground development. Moreover, in view of the recommended transportation study, land adjoining Route 6 and appropriate for development in terms of the authorizing act should be reserved for possible future parking to serve beaches and other developments.

For these reasons, this plan does not recommend that the Seashore provide campgrounds. It is recommended that the Service work with the Commonwealth of Massachusetts and with private operators to provide more campsites on the stable soils of the upper Cape and adjacent mainland, and that it encourage the three private campgrounds within the Seashore to improve their facilities.

Primitive Campsites The concept of primitive campsites in conjunction with the Seashore trail systems should be carefully evaluated before any plan to provide such use is made. Such facilities may seem desirable. However, visitor demand, the possibilities of adverse uses, and the difficulty of control of such uses may warrant their exclusion.

Golf A nine-hole golf course at Highland Light, one of the oldest in the United States, is operated by the town of Truro under a concession contract. Considering its historical value and the development already present, continued operation is desirable.

Bike Trails Eleven miles of bicycle trails have been built within the Seashore. Their popularity is reflected in a rapid increase in bike rentals outside the Seashore. Additional trails, including one running from Eastham to Provincetown should be provided. Existing trails can be reached from bike rental agencies only by riding over heavily traveled roads and highways; a dangerous situation. Highest priority should be given to providing trail connections into adjacent town centers so that cyclists can reach the trails in safety. The National Park Service has authority to construct those parts of the connections within the boundary. Construction of those parts which lie outside the boundary will require additional legislative authority or will have to be done by others.

Youth Hostels Four American Youth Hostels are located on the Cape — one on Nantucket, one in Hyannis, one in Orleans, and the fourth within the Seashore boundary overlooking Pamet Valley. These hostels are extensively used during the summer season, providing inexpensive supervised accommodations for youth. The hostel system is a use compatible with the purposes of the Seashore. It is a fine complementary facility to the proposed bike trails. Continued cooperation between the Seashore and American Youth Hostels is desirable. Future consideration might be given to expansion of the hostel system in the surrounding region.

Winter Sports Terrain and climate severely limit winter sports. There are few hills within the Seashore long and steep enough for good skiing, and snows come infrequently and melt rapidly. Prolonged cold weather

seldom occurs, so the inland ponds seldom freeze solidly enough for skating or ice fishing.

A popular winter activity is storm watching. Only a person who has seen, heard and felt the storm surf tearing at the outer Cape can appreciate the fascination of this phenomenon. Existing beach parking is the only facility required.

Other Activities Surfing is rapidly increasing in popularity. The best surf occurs in the Coast Guard Beach and Marconi Beach areas, where beaches already exist. Surfers use existing parking facilities, and areas of beach are designated for their use.

Horses are available from stables near the park and miles of sand road both within outside the Seashore are available.

Scuba diving occurs, but is not extensive. Areas with enough interest to support underwater trails do not occur except in Nauset Marsh, which is not suitable for scuba diving.

Hiking is a popular use. Hiking trails, including one the length of the Seashore, should be developed.

INTERPRETATION

The ecology of Cape Cod has been profoundly influenced by man's activities, and man's activities have, in turn, been influenced by the geography, geology, soils and vegetation of the Cape. Consequently, nature and man are both integral to the interpretive theme.

This interpretive theme is presented through various media. The visitor is introduced to the Seashore through exhibits and a brief film presentation at the Salt Pond Visitor Center. During the summer, various facets of the theme are presented at evening programs in the adjacent amphitheater. The Provincelands Visitor Center concentrates on human history.

In addition, interpretive trails and publications have been developed. The staff conducts a full and varied program of guided walks, interpretive talks, and evening programs. More recently, the staff has originated new "in depth" activities — talks by Seashore neighbors versed in special subjects related to the Cape; sketching trips, including some designed especially for children; nature walks along the intertidal zone of the Bayside; evening walks over Great Island to Jeremy Point with a campfire and return along the beach by moonlight — to more intimately acquaint the visitor with the forms and processes of nature and man's interaction with them.

Additional facilities and services are recommended to present the Seashore story more effectively, and to accommodate increasing visitor use. The proposed Bayside developments will concentrate on the natural history of the Cape. It will contain facilities for natural history research and serve as a focal point for increased use of Great Island for interpretive and research purposes. The proposed Life Saving Museum to be established in the Nauset Coast Guard Station will present the dramatic story of the work of the Coast Guard and its antecedents.

An historical vignette, to include a saltworks, is being developed on Fort Hill. A working historic cranberry bog is planned. A fresh and exciting concept — a series of trails-connected vignettes illustrating various phases of Cape Cod life, from undisturbed original natural scene through several phases of man's activities is under development at the Fresh Brook Village site.

While these existing and planned interpretive facilities and services are well-balanced both geographically and in subject matter, there should be a continuing effort to improve and extend them. Additional nature trails and interpretive literature will be needed. More interpretive activities illustrative of Cape Cod's past, such as town band concerts and programs built upon the Cape's attractiveness to writers and artists are planned.

All interpretation should consider two salient aspects of Cape Cod National Seashore. First is that visitors come predominantly from urban areas in the Northeast, are relatively well-educated and possess an urban outlook and sophistication; they also constitute a sampling of a large fraction (one-fourth to one-third) of the Nation's total population. Second is that Cape Cod National Seashore is relatively small — laced with roads whose presence must be accepted and speckled with improved properties whose owners' rights must be respected — but with a surprisingly varied and attractive natural and historic landscape.

Great sensitivity will need to be exercised at all proposed interpretive developments to assure that the resource, the surrounding environment, and private parties are not adversely affected. This will be especially true in such areas as the Bayside and the Pamet Valley, where private properties, low-grade roads, and fragile resources are all inherent parts of the scene.

The very nature of the public which the park staff serves at Cape Cod demands that the Service attain the highest possible quality in interpretation. People who have been exposed to the great range of excellent cultural resources and entertainment in eastern urban areas will not listen and be stirred by an interpretive message at the Cape if it is inept or amateurish even in small degree. Moreover, any failing in interpretation to these people is especially serious, for city people are an increasing majority of the Nation's population, and they above all should have some understanding of the workings and limitations of the natural world. Their actions, individually and collectively, will profoundly affect the complexion of this country's landscape and the balance of its resources.

One further interpretive resource needs to be further developed, and that is the knowledge and talent of people living on the Cape and in adjacent areas. Cape Cod is the year-round or summer home of many people who have studied the local land and its history. Often these people are teachers, writers, or entertainers; they have unusual abilities for expression. They should be sought out whenever possible and induced to contribute their special knowledge and abilities to enrich the Seashore's interpretive program. This is already being done in having Seashore neighbors speak on their Cape Cod studies at evening programs. It should be enlarged to enlist people's assistance in basic research, writing, editing, audiovisual narration and so on.

ENVIRONMENTAL EDUCATION

A substantial and increasing proportion of Seashore visitors are city dwellers who have had little contact with nature and who have little understanding of nature and man's relationship with it. If such visitors are to respect the resources of the Seashore, refrain from activities which damage those resources, and support continued preservation, they must understand the environment and man's dependence upon it. The Seashore, where evidences of both natural and man-induced environmental changes is so evident, is an ideal place in which to instill such an understanding.

The interrelationship between man and his environment is stressed in all phases of the interpretive program. It is also the subject of a special program for schools.

Most American children now grow up without any contact with or appreciation of nature and man's dependence upon it. Therefore, programs to introduce these children to natural forces and the effects of man's tinkering with them are extremely important.

Such a program is being developed. Three environmental study areas have been designated, and educational aids have been prepared for school use. Schools in the region have been contacted and encouraged

to use both the study areas and the study materials. Overnight accommodations for school groups using the National Park Service NEED Program are temporarily provided in the Nauset Coast Guard Station, and classrooms are provided in the basement of the Salt Pond Visitor Center.

This program has operated for over a year with one school district participating. It has proven to be quite successful. The one school district should be encouraged to participate. The Nauset Coast Guard Station is being used under special use permit for dormitory and classroom space. As the program expands this space will become inadequate. Consideration should be given to providing additional space, both for accommodations and classrooms. Structures already acquired by the seashore could be utilized for dormitory space, while classroom space may be considered in the proposed Bayside developments.

The interpretive program is designed in part to acquaint visitors with natural forces and their vital role in our lives. To further disseminate these concepts, environmental study materials should be made available through sale or rental to visitors wishing to use them as program material for service club meetings and the like.

RESOURCE MANAGEMENT AND VISITOR PROTECTION

Erosion Control The bluffs extending from Coast Guard Beach north to beyond Highland Light are being cut back at an average rate of three feet a year, though the rate varies from place to place and season to season. In the recent past, severe storms have broken through the barrier dune of Nauset Beach at the Coast Guard Beach parking lot, and an inlet may eventually form in this vicinity. At Ballston Beach, in Truro, the old glacial meltwater channel in which the Pamet River now flows is separated from the sea by a relatively low dune which is sometimes almost over-topped by storm waves at exceptionally high tides during severe storms. At Herring Cove, the beach occasionally recedes during winter storms to the extent that an asphalt revetment has been installed to protect the existing bathhouse and parking area.

This problem has been studied by such agencies as the Geological Survey and the Corps of Engineers. Control of erosion on the scale at which it is taking place along the entire outer scarp is not practicable. Moreover, materials eroded from the scarp are transported by the sea to nourish the beaches and spits to the north and south.

Feasible control measures for the three areas mentioned above should be investigated. However, when considering implementation of such methods, it should be remembered that shore erosion on the outer cape is a part of the natural order. It may well be that such implementation would damage the natural resource more than no protection at all.

Herring Cove Beach was included in a beach erosion control study carried out by the Corps of Engineers in cooperation with the Commonwealth of Massachusetts. This study developed an authorized project at Herring Cove, consisting of widening about 1,600 feet of beach to a 125-foot width by direct placement of sandfill, construction of four groins and construction of a seawall. Sandfill was deferred until it was ascertained if the groins fill naturally at a reasonable rate. This area should be reexamined to determine whether, when new facilities are provided during the recommended expansion, natural processes would create a sufficiently wide summer beach if the asphalt revetment were removed, and, if not, what beach nourishment measures are required. These studies will require cooperation with the Corps of Engineers, the Geological Survey, the Commonwealth of Massachusetts, and the affected towns, particularly Truro.

Dunes Stabilization Natural forces, such human activities as driving over dunes and heath, and military construction in the Camp Wellfleet area had denuded substantial areas within the Seashore and exposed the sand and sandy soils to wind action. Much has been done toward restoring these areas. Beach grass has been planted and fertilized, stabilizing many sandy areas. Natural reseeding of native plants, such as pitch pine, has taken place with excellent results over much of Camp Wellfleet.

This program should continue where stabilization is required. Particular attention should be given to areas of intensive public use where damage to vegetation may lead to wind erosion, to construction sites, to areas damaged by storms where this type of erosion control will be effective, and to unneeded roads, paths and trails. A careful survey of fire control access requirements should be coordinated with revegetation of old roads, and control points established where needed to prevent unauthorized use.

Removal of Intrusions Numerous man-made intrusions occur throughout the Seashore. Overhead utility lines are particularly notable. As opportunity occurs, such intrusions should be removed, screened or relocated. Public use areas should be given priority.

Insect and Plant Disease Control The Cape Cod Mosquito Control Board exercises a control program for mosquito and the green head fly within Seashore lands and in accordance with the provision of the deed transferring State lands. A cooperative agreement with the Board is desirable to help outline responsibilities, action and the resources of the Seashore and the Board, and to improve communications and understanding. The Seashore will work as closely as possible with the Board in fulfilling the objectives of both organizations.

Insect, tree and plant disease control through the use of chemicals will be thoroughly investigated and planned, and cleared through Department and Service channels as required by various regulations.

Hunting Hunting is primarily for deer and migratory waterfowl with a nominal amount of small game hunting. Shotguns only may be used. Intensive use occurs during opening days and during the one week deer season in December. An estimated 75 to 90 percent of this use is by local residents. In the interest of visitor protection and the protection of private dwellings, a systematic study of this activity is desirable. Developed visitor use areas are closed to hunting.

Fire Suppression Serious forest fire potential is evident over much of the Cape, including Seashore lands. A catastrophic fire could occur under extremely adverse conditions resulting in considerable loss of forest and vegetative cover, private dwellings and other developments and facilities now serving the communities and visitors to the lower Cape.

Fire protection is primarily a cooperative measure. The Seashore depends to a great extent on the towns and the Commonwealth for detection and suppression and they have provided this service in a highly competent manner. Close and amicable cooperation is essential to the success of the program.

Cooperative agreements are in effect with the four towns in which the bulk of Seashore lands are located. These receive annual review and adjustment when necessary. This cooperative arrangement is far more practical than a duplication of efforts by the respective agencies.

One of the most effective contributions which the Seashore can make to the overall program is fire prevention education and information. Many urban people visit the Seashore each season and environmental education program will touch base with large groups of young, impressionable people. Here is an opportunity which should be pursued.

The towns furnish much of the fire protection for buildings within the Seashore. First aid equipment and hydrant systems are located throughout the major Seashore developments, but most of the fire fighting equipment is furnished by the towns.

In the future the Seashore may require fire detection and suppression system in its historic houses. This is often costly, and requires a careful evaluation of the actual value of the structure, contents and public use and enjoyment of the facility. A security alarm system should be considered for the Atwood-Higgins complex.

Law Enforcement The unique land use and jurisdictional patterns of the Seashore require coordinated efforts by law enforcement agencies. Here again, cooperation, understanding and excellent communications are required.

The U.S.Commissioner holds court each week during the summer at Park Headquarters. This system and schedule works well and reduces the time personnel must be away from other duties while attending court sessions.

A bail-bond system has been considered and it is recommended.

Law enforcement activities are increasing as use increases. It is essential that all personnel assigned to law enforcement be well-trained and familiar with all aspects of the program. Permanent employees must take advantage of training opportunities to increase their skills and training abilities. Selective recruitment of seasonal employees for law enforcement assignments and a continuity of experienced seasonal employees is highly desirable.

Specialized equipment must be provided as the need occurs to round out a highly organized, well-trained unit. Any considerations of a new organizational structure for the Seashore should include a law enforcement specialist position.

Beach Use Beach use is one of the most intensive activities within the Seashore and is one that will increase in the future. Many visitors are confused when they find that the beach they had planned to use is filled and parking is unavailable. Under these circumstances they may wander aimlessly about and often, in exasperation, will park along roads or in driveways, violating town and Seashore regulations and the rights of private residents. This adverse use affects the town, the Seashore and private residents in many ways. Traffic hazards, erosion of road shoulders, dunes and cliffs, and intrusion are but a few. A system of improved communications is desirable in the interest of all concerned, including the confused visitor.

All public beaches should be in a position to advise visitors of the nearest beach where parking is available. A network of radio communication with up-to-date information dispatched through a central office should be utilized. Commercial radio stations within the area should also be used. Signs along Highway 6 are another possiblility.

Still another means of improving communications would be to establish a large information, orientation center near Sagamore at Cape Cod Canal, perhaps as a part of the service now provided by the Cape Cod Chamber of Commerce. Here a visitor could be oriented, make reservations and learn what beaches may be available before proceeding down Cape. Regional planning and coordination is required to pursue any improvements in furnishing information.

Beach Buggies The control and use of beach buggies has been greatly improved by establishing designated routes through the dune areas, restricting overnight stays to designated areas, and publishing general information on beach buggy use in the form of handout folders. Beach buggy users are gradually becoming accustomed to the various regulations, familiar with the reasons for them, and in most cases support these control measures.

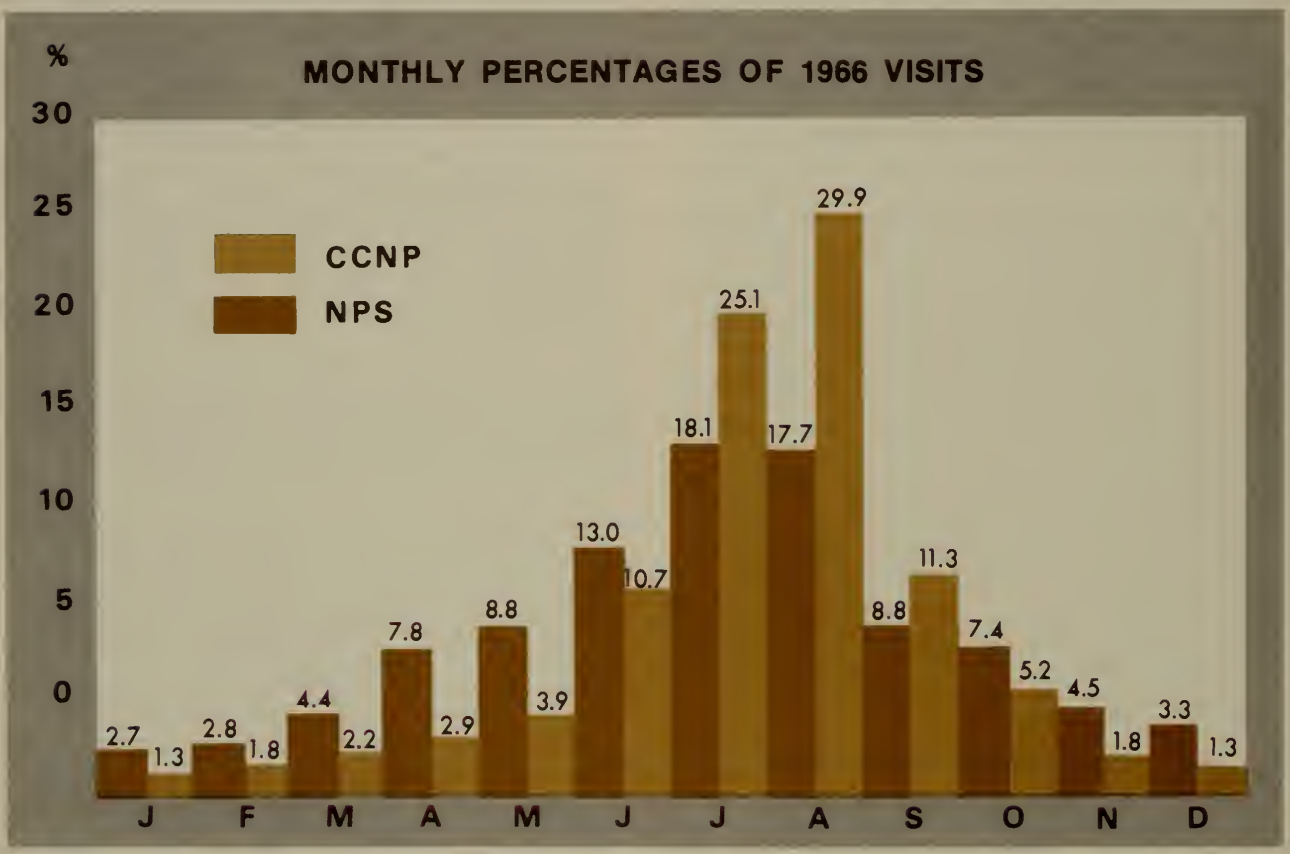
However, the effect of beach buggy travel on the dunes' ecology should be carefully studied. The loss of values within the areas of travel should be considered.

Presently, more than a thousand permits to operate beach buggies are issued each year. Optimum use should be determined and actual use held within the optimum figure.

It is quite evident that all aspects of Resource Management and Visitor Protection programs require the fullest cooperative efforts. The items mentioned are but a few that require detailed coordination of one or more agencies or organizations. Maintenance of good working relationship with all cooperators cannot be stressed enough. Lines of communication which afford an understanding of objectives and principles of all parties are essential to the success of many programs, and, in fact, to the productive existence of the Seashore. Every effort should be made to meet and know the people involved in these programs, to understand their objectives and to relate to them the objectives of the Seashore. Progress has been made--it must be continued.

OFF-SEASON USE

In 1967, 57.8 percent of Cape Cod National Seashore's visitors came in July and August. Only 1.3 percent came in January. This pattern means that the Seashore is crowded to near capacity for two months, and only moderately or lightly used the rest of the year. The Cape's climate rules out winter sports development. Still, there is much potential for off-season use. The water



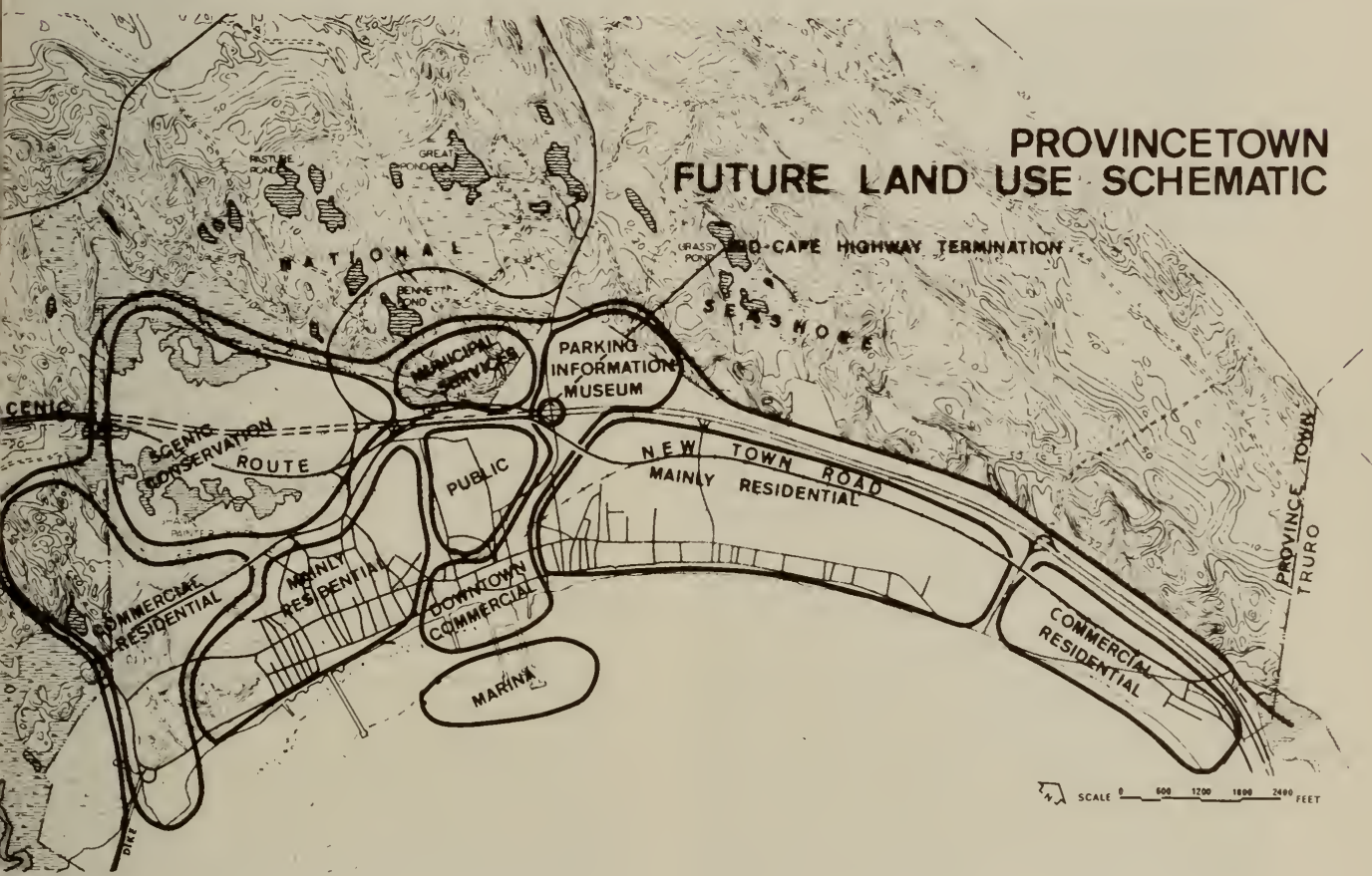
stays comparatively warm well into September, and on sunny days beach use is enjoyable into early October. Autumn color is excellent, and the winter scene, while austere, has its own beauty. Spring is also a pleasant season. Hiking, bicycling, beachcombing, nature study and similar activities can be pleasant even during January and February.

Most tourist facilities close after Labor Day, since there is little demand for them. The fact that so many facilities are closed from early September through May or early June presents an obstacle to greater off-season use of the Seashore, because there is less for visitors to do and fewer places to eat or stay overnight.

This cycle can be broken, and it is in the interest of the Seashore to help break it. This will require a joint effort on the part of local business and the Seashore. It will require that the Seashore, when operating funds and staff permit, provide off-season programs and winterized facilities including comfort stations. It will also require an intensive campaign by the Cape tourist industry to promote off-season use.

LAND ACQUISITION

Of the 44,600 acres of land and submerged land within the authorized boundary of the Seashore, 21,391.30 acres have been acquired, 169 acres are in Federal ownership under other agencies, 14,210 acres are owned by the State or by towns, and about 1,311 acres have or are entitled to improved property status. There remains about 7,519



acres of private land to be acquired.

Remaining land subject to acquisition should be acquired. The Land Acquisition priority program is:

- Land for an access road or some other mode of transportation to proposed Bayside Visitor Facilities to avoid aggravating traffic congestion on the narrow, winding, low capacity town roads now in use.

- Land for the preservation of natural values and ecological communities, including ocean frontage, Eastham Bog area, Nauset Marsh in Eastham, heath area in Truro and the Great Ponds in Wellfleet over which the State now has jurisdiction.

- Land for bicycle and hiking trails between Eastham (Coast Guard Beach) and Provincetown (Herring Cove Beach) to tie in with existing portions in Eastham, Head of the Meadow-High Head, and the Province Lands.

A tract by tract land acquisition priority map will be prepared.

COORDINATED PLANNING

As the regional analysis points out, few units of the National Park System are so integral a part of their region as is Cape Cod. Nearly every facet of Seashore development and operations affect or are affected by other governmental or private bodies. Many of the major problems faced by the Seashore as use increases will be faced by the entire Cape, and what the Cape as a whole does about them will profoundly influence the Seashore. Thus, it is imperative that the National Park Service establish and maintain a close working relationship with all other agencies involved in planning on Cape Cod.

Beside the National Park Service, Federal agencies active on the Cape include the Corps of Engineers, the United States Air Force, the Bureau of Sports Fisheries and Wildlife, the Bureau of Commercial Fisheries, the Geological Survey, and the Coast Guard. State agencies particularly important in regional planning include the Department of Public Works and the Department of Natural Resources. Through its review of statewide comprehensive outdoor recreation plans and its continuing analysis of all phases of the Federal outdoor recreation effort, the Bureau of Outdoor Recreation helps achieve coordination in this field.

Towns are also very much involved in planning, since in Massachusetts basic responsibility for land use planning and zoning is vested in the town. The six towns within the Seashore lies are particularly interrelated with the Seashore, since they are responsible for such public functions as police and fire protection and local road construction and maintenance, and since all but Provincetown own considerable land within Seashore boundaries. Barnstable County is also an important factor in this field. Its Cape Cod Planning and Economic Development Commission, professionally staffed, gathers data, prepares studies and regional plans for consideration by the towns, and provides planning assistance. The National Park Service should work closely with all of these agencies, relying upon the Cape Cod National Seashore Advisory Commission for advice and assistance in liaison with the towns.

The Seashore, with guidance and assistance as needed from other National Park Service offices, should develop and maintain a close working relationship with various agencies of the State to provide coordination on specific items.

The present Massachusetts State Outdoor Recreation Plan makes no meaningful comment on the Seashore; neither the Regional Description nor the Regional Needs

section even mention it. This plan is being revised, and the State is now in a position to include Federal agency planning within the framework of its Statewide Plan. The Seashore should initiate and follow up on contacts with the State to encourage expansion of State campgrounds at Shawme-Crowell State Park, Nickerson State Park, Myles Standish State Forest, and Scusset State Beach, to keep appraised of any plans to expand Nickerson State Park, and in general to promote the exchange of information and ideas on a continuing basis. The Corps of Engineers are considering updating the Recreation Master Plan for the Cape Cod Canal. The Seashore should initiate contacts with the Corps to keep informed of that agency's plans as they may affect the Seashore and to explore possible use of Corps lands for a Cape Cod Visitor Information Center. The Seashore should also initiate and maintain contact with the State Department of Public Works and the Bureau of Public Roads to keep informed of long-range highway planning both for the Cape and its approaches which may affect future development of the Cape Cod Region and influence day use of the Seashore. Finally, the Seashore and the Service as a whole should maintain the closest possible working relationship with the Cape Cod Planning and Economic Development Commission.

Some planning considerations merit further mention. First, the town of Provincetown has had a Master Plan Study Report prepared for presentation at Town Meeting. This plan proposed a central parking facility outside the town center so that auto access to the extremely congested area can be replaced by public transportation. The concept is interesting and may be adaptable to future Park Service planning in this area. The Service should work with the Town if the plan is approved to ensure implementation of the concept in a manner which is most beneficial to both the Town and the Seashore. The Service has no legal authority in financing the proposal, and the plan might require a boundary change. Second, the town of Truro has begun a town master plan. The Seashore should work closely with the town to assure orderly development consonant with the needs of both and in harmony with their environment.

Third, the Geological Survey has licensed a proposed offshore oil and gas exploration in the area. As the Santa Barbara Channel episode has proved, safe practices and a lively concern for ecological considerations is essential in such explorations. As an example, the largest wintering population of eider ducks in the United States occurs along the south tip of the Seashore on the east side of Monomoy, and oil reaching this area could result in irreparable harm to this species. The National Park Service in conjunction with other interested agencies must do everything it can to assure that any off-shore exploration is so conducted as to assure against accident.

Finally, the National Park Service should work as closely as possible with any private organizations involved in planning activities for all or sections of the Cape.

MAINTENANCE

Cape Cod National Seashore has the special maintenance problems common to all seashores--extensive utility systems, beach cleanup, intensive turf maintenance in developed areas, periodic storm damage, erosion, and so forth. In addition, it has some unique requirements--utilities and roads owned in common with owners of improved property, demands for cleanup on and near improved properties, requests for no-trespassing signs for improved properties, need for close cooperation with the Coast Guard, Navy, Air Force, Corps of Engineers, U.S. Geological Survey, and State, County, and Town Governments, extensive rehabilitation of structures used for employee housing, and so forth.

As a result of these demands, which increase with each new facility and will be further increased by the recommended program to encourage greater off-season use, maintenance and operating funds and staff are not adequate. Consequently, such facilities as water and sewer systems, visitor centers, bathhouses, interpretive trail signs, markers and wayside exhibits, and amphitheaters can be given only Class C maintenance rather than the Class A maintenance that the capital investment and visitor use require. The Seashore has established maintenance priorities and schedules, and adheres to them.

Waste Disposal Each adjacent town operates a town dump. Solid waste disposal is being studied by the Cape Cod Planning and Economic Development Commission, and the Service will cooperate with the Commission in this matter.

Water Supply A special use permit has been entered into with the town of Provincetown for use of ground water within the Seashore for mutual benefit of town and Seashore. Similar arrangements should be developed with other towns in accordance with established criteria.

HISTORIC STRUCTURES

Of the 85 historic structures shown on the Historic Architecture Map, nine are in Federal ownership. Two, the Penniman House and barn, have been developed as exhibits in place. Three, the Atwood-Higgins complex, are subject to life estate and will eventually become an historic house museum. Those structures remaining in private ownership have improved property status.

The purpose of the historic structures management program is to assure the preservation of structures of merit as architectural specimens and as part of the Cape Cod

scene. This can best be done by encouraging continued private ownership. If additional such structures are acquired, they should be used for park purposes.

This program requires continuing inventory and study to assure timely identification of structures of merit and to permit decisions as to how best to assure their preservation.

Lighthouses and Coast Guard Stations should be acquired, when and if they become available, for use in the interpretive program.

HISTORIC ARCHITECTURE

Note: House names were assigned for convenience, and do not follow a consistent pattern. Names of first owner or early occupant will be assigned.

1. THOMAS K. SMALL HOUSE
   ISSAC SMALL HOUSE
   HIGHLAND LIGHT
2. BENJAMIN S. KELLEY HOUSE
   JEDEDIAH HIGGINS HOUSE
   DANIEL P. HIGGINS BARN
   EBENEZER DYER HOUSE
   DANIEL P. HIGGINS HOUSE
   SAMUEL PAINE HOUSE
   RICHARD PAINE HOUSE
   JOSHUA RICH HOUSE
   SHEBNAH RICH HOUSE
   JEREMIAH HIGGINS HOUSE
   THOMAS DYER HOUSE
   PAINE—ATKINS HOUSE
   CAPT. ZOETH RICH HOUSE
3. BOG HOUSE
   LOT HARDING HOUSE
   JOSHUA DYER HOUSE
   AMBROSE SNOW PRIVY
   AMBROSE SNOW HOUSE AND COBBLER SHOP
   NATHANIEL DYER HOUSE
   EPHRAIM SNOW HOUSE
   BENJAMIN DYER HOUSE
4. JOSHUA SNOW WOODHOUSE
   ZENAS ADAMS HOUSE
   JOSHUA SNOW HOUSE
   PAUL KNOWLES HOUSE
   JONAH ATKINS HOUSE
   EPHRAIM HARDING HOUSE
   RICHARD RICH HOUSE
   STEPHEN SNOW HOUSE
   WILLIAM P. SNOW HOUSE
   JOSEPH RICH HOUSE
   JONATHAN COLLINS HOUSE
   ISSAC RICH HOUSE
5. BENJAMIN COLLINS HOUSE
6. THOMAS HOPKINS HOUSE
   SALLY MAYO HOUSE
   DAVID STOCKER HOUSE
   JOHN C. RICH HOUSE
   NELIEMIAH MAYO HOUSE
   JOHN MAYO HOUSE
7. WILLIAM T. NEWCOMB HOUSE
   EPHRAIM RICH HOUSE
   THOMAS RICH, JR. HOUSE
   JOSEPH S. COLE HOUSE
   RICH—COBB HOUSE
   ELISHA COBB HOUSE
   ELISHA COBB SUMMER KITCHEN
   UNIDENTIFIED
8. SAMUEL RICH HOUSE
   DAVID BAKER HOUSE
   HENRY ATWOOD HOUSE
   EBENEZER L. ATWOOD HOUSE
   GEORGE K. HIGGINS STORE AND BARN
   ATWOOD — HIGGINS HOUSE
9. ELNATHAN HIGGINS
   DAVID CURRAN HOUSE
   RYDER—PAINE HOUSE
   JUSTIN WILLIAMS HOUSE
   HENRY GREY HOUSE
   UNIDENTIFIED
10. EDMUND FREEMAN HOUSE AND WOODHOUSE
    UNIDENTIFIED
11. JOHN NEWCOMB HOUSE
    JOSIAH HIGGINS HOUSE
12. CLARENCE H. ROWELL HOUSE
    CLARA ROWELL HOUSE
    UNIDENTIFIED
    THREE STRUCTURES OF SIGNIFICANCE
13. MARCONI WIRELESS FOUNDATIONS AND TOWER BASES
14. SYLVANUS DOANE HOUSE
    UNIDENTIFIED
15. NOAH DOANE HOUSE
    DOANE BREWER HOUSE
    ISAIAH DOANE HOUSE
    SIMEON DOANE HOUSE
16. SETH KNOWLES
    SYVANUS KNOWLES HOUSE
    CAPT EDWARD PENNIMAN HOUSE AND BARN

HIGHLAND LIGHT COMPLEX

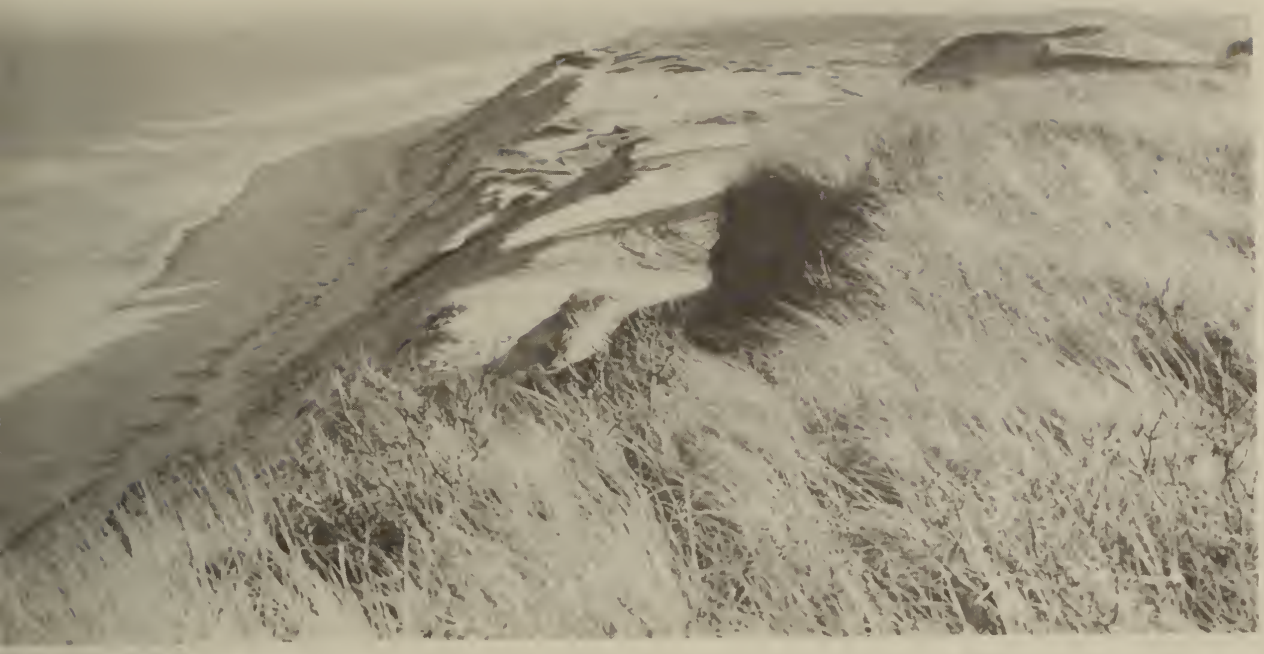
The Highland Light complex presents both an opportunity for imaginative planning and a set of complex planning considerations. Composed of a variety of uses and activities within a small but geologically and esthetically significant land form, the complex requires a detailed development concept.

Elements of the complex include a bluff rising 135 feet from the Atlantic, the famous and still active Highland or Cape Cod Light, and the so-called Highland House Hotel, built in 1910 and named after a much earlier and historic structure which was moved from the area several years ago. Other important features include two gift shops (Jobi and Little Shop), the nine-hole Highland Golf Course, Horton's campground, and several other improved properties.

The physical setting is bleak but picturesque — reminiscent of a Scottish moor. The view over the Atlantic and along the sweep of Great Beach is striking. It is an area of scenic appeal and historic interest which should be made available for public visitation and enjoyment. However, the planning complexities are many. Present parking and access are inadequate. There are no surfaced trails nor barriers at the top of the bluff. Visitor use must be carefully channeled to avoid conflict with the still-active lighthouse and nearby improved properties and commercial activities. The Highland House, although in poor condition, is being operated as a museum and headquarters by the Truro Historical Society on a cooperative agreement.

NAUSET LIGHT BEACH

Nauset Light Beach merits further consideration. It was given to the Federal Government by the town of Eastham with the stipulation that its use as a beach would continue. Some investment, including a new comfort station, has been made at this beach.



However, the beach lies at the bottom of a steep scarp, and stairs are required to provide access from the parking area at the top of the scarp to the beach at its foot. Erosion of the scarp at this point has progressed at the average rate of about three feet per year. In the past six years the bluff has receded about twenty-five feet and two rows of parking have been lost. Present Federal landholdings in the vicinity, with the exception of the parcel donated by the town, are small and are not contiguous.

Nauset Light Beach is not well suited to development as a major beach. However, in view of the stipulation made with the Town of Eastham and the ever-increasing demand for beach facilities, a beach in this immediate vicinity should be continued.

Existing Federal lands in the vicinity and suitable for such use in terms of the authorizing legislation could be so developed. As opportunity permits, Federal holdings should be blocked in to improve the development potentials.

BAY SIDE

Planning for this segment of Cape Cod National Seashore is influenced by a number of factors. Among these factors are those relating to access, uncertainty as to the amount of use the proposed Bayside Beach will receive in view of the experience of town-operated bay beaches, land ownership patterns, and a Seashore initiated restudy of interpretive goals for this segment. At present, these factors and their interrelationship are too fluid to permit definitive development planning for the Bay Side. As these factors are brought into better focus by the recommended transportation system study by a refinement of interpretive thinking, and by the passage of time, adjustment of the General Development Plan as it relates to this segment of the Seashore should be reviewed and revised if necessary, and Developed Area Schematics prepared as a basis for programming and construction.

Priority Of Needs

This section of the master plan sets out the sequence of actions needed to conserve, use, and manage the Seashore. At this stage of development, the Seashore is an operating identity. A few problems exist which should be solved before major development is carried further. The next priorities should be for study and planning. The transportation study should be undertaken immediately. Concurrently, the Service should work closely with the State Department of Public Works, Bureau of Public Roads, and regional and town planning groups on further study of the Route 6 problem. Acquisition of remaining unimproved lands should be begun. While much of the recommended development is on Federally owned land, the length of the Seashore hiking trail and several bicycle, short hiking and nature trails cannot be built until lands along the rights-of-way have been acquired.

The transportation study can begin now. It is definitely related to the proposed Provincetown town plan, planning decisions concerning Route 6, and other regional considerations.

If mass transportation systems are found to be feasible, additional parking at Herring Cove and Marconi Beaches may be unnecessary. However, beach use is increasing and expansion may be necessary before the transportation study is complete or before the systems can be planned or developed. The decision as to whether or not to expand the parking at these beaches cannot be made in this plan. Similarly final development plans for the Griffin Island Visitor Center and a bayside beach development cannot be made until problems of transportation to them can be solved.

Spur trails connecting the Seashore bicycle trails to rental centers should be provided.

Developed Area Plans and other Action Plans should be completed as soon as possible.

There is no clear-cut priority in which recommended facilities should be provided. Determination of priority should be made through the regular programming process.

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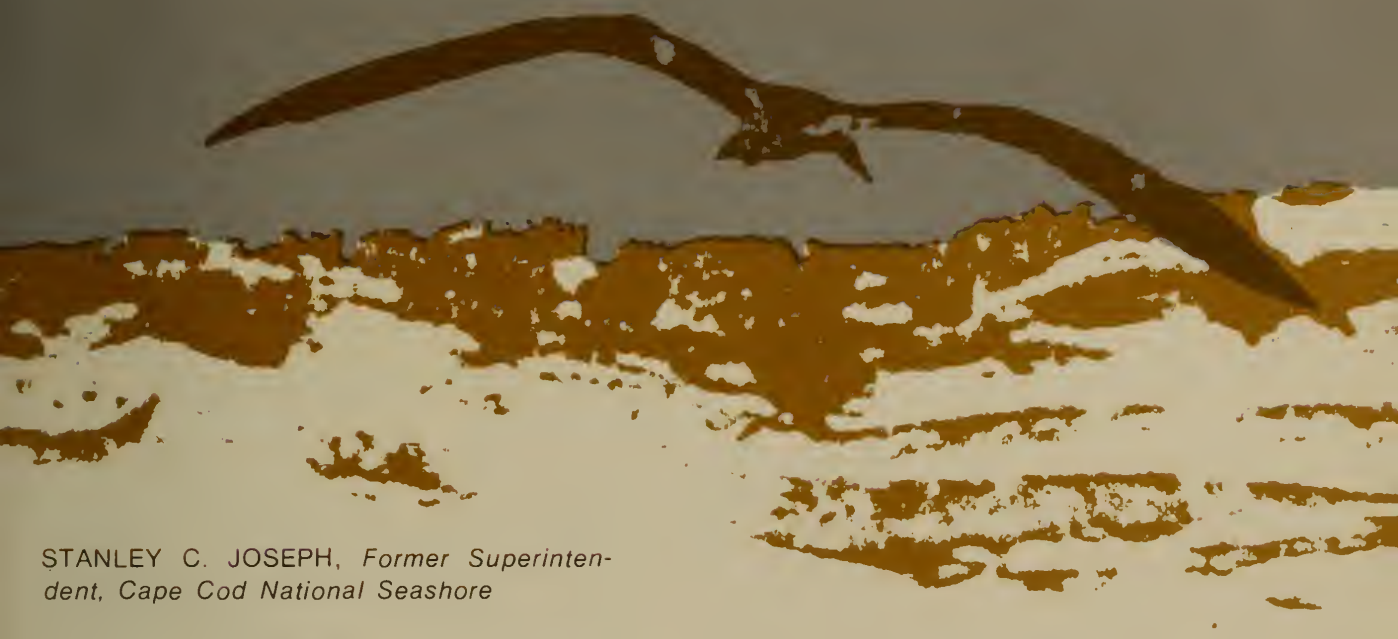

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Note. Functions and organizational unit to which planning team members were responsible.

U.S. DEPARTMENT OF THE INTERIOR / NATIONAL PARK SERVICE